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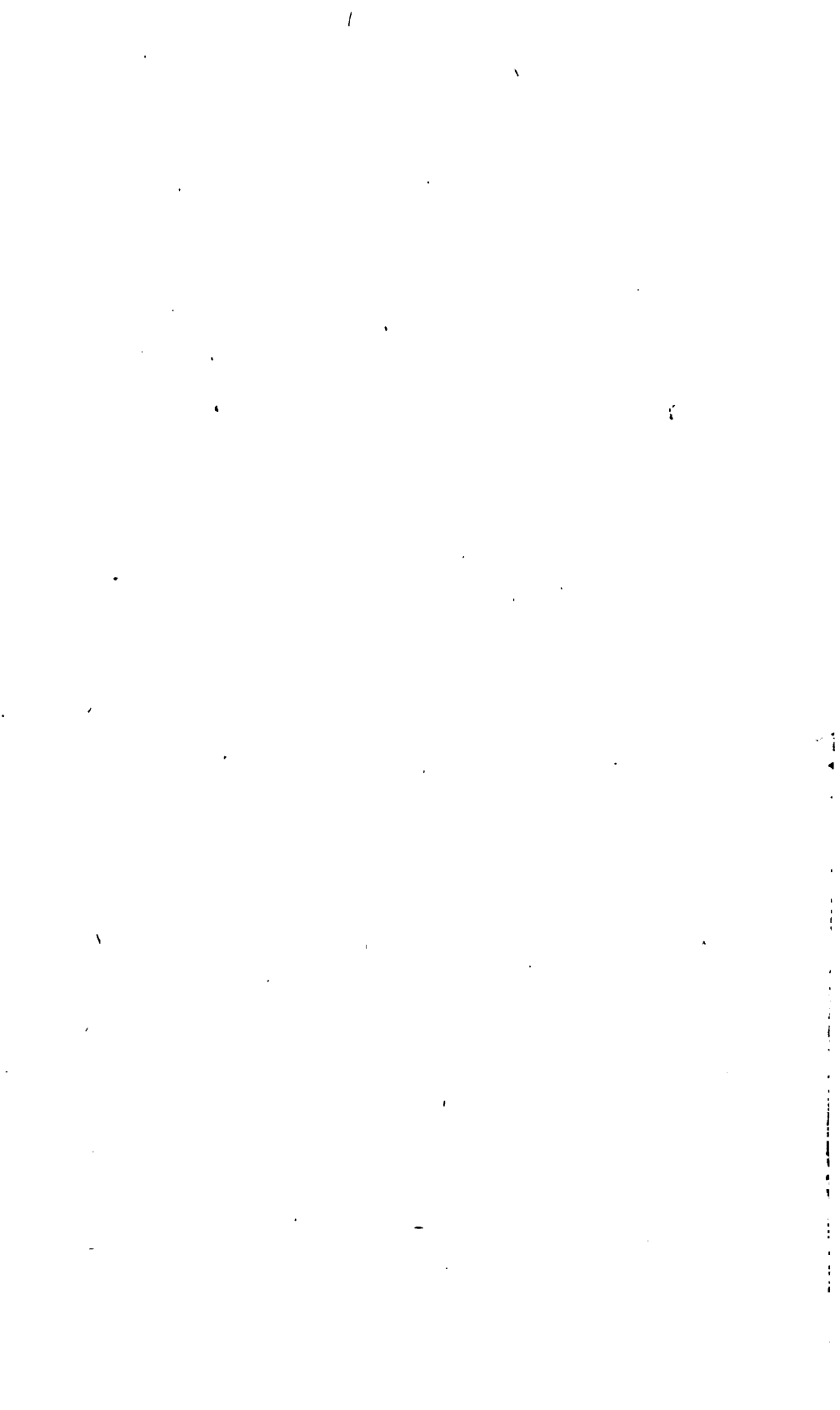
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VIEW
OF THE
SYSTEM OF EDUCATION
AT PRESENT PURSUED IN THE
SCHOOLS AND UNIVERSITIES
OF
SCOTLAND.

WITH AN
APPENDIX,

Containing

Communications relative to the University of CAMBRIDGE,
School of WESTMINSTER, the PERTH Academy; together with
a more detailed Account of the University of ST ANDREWS:

BY THE REV. M. RUSSEL, M. A.
EPISCOPAL MINISTER, LEITH.

*Tu pe est, in tuis rebus quae
Ad patriam pertinent, hospitium esse.*—MANUTIUS.

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PREFACE.

THE author of these Letters has little more to say of them, than that they originated in a correspondence which was carried on between an old class-fellow and himself in the year 1806, —that his thoughts have since that date frequently recurred to the topics which are discussed in them,—and that, as it was to be expected, their importance gradually increased in his estimation, until it became easy to convince him that the Public also would regard them with some interest.

It is perhaps unnecessary to mention, with the view of preventing unfair conclusions or uncharitable surmises, that no teacher in any of our public schools or universities has been privy to the author's intentions, nor in any way concerned in his undertaking ; for he willingly sacrificed the many obvious advantages of consulting such

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of his friends as hold appointments in those seats of learning, in order to preclude even the imputation of partiality. He has, in truth, no private end to serve, no prejudices to gratify;—there is no one whom he wishes particularly to please, and none whom he is not unwilling to offend.

As it is not likely that this pamphlet will ever be viewed as a subject of criticism, it is less necessary to solicit indulgence, or to deprecate severity of judgment. Being written at different times, it was almost impossible to prevent repetitions of the same thoughts, as well as of the same forms of expression; and the total inexperience of the author, as to superintending and correcting the press, has occasioned a good many inaccuracies, omissions, and obscurities. It could not, therefore, be an object of ambition with him to prefix his name to a production confessedly so imperfect; and it is only because it contains strictures upon institutions which ought never to be made the subject of public discussion, without the utmost facility of explanation, and every possible means of redress, that it has not been sent forth anonymously.

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LETTER I.

DEAR SIR,

AS you think the publication of my letters, on the present state of our Classical and Philosophical Education, may be of some use both to parents and teachers; and as several of our common friends who have perused them, entertain the same opinion, I have at length come to the resolution of submitting them to the public eye. Now, although I have re-written the greater part of them, introduced new matter, and expunged or corrected several passages which bore too glaring marks of haste, I am as much convinced as ever, that they deserve attention on no other account than because they respect a subject of the utmost importance, and contain a few facts connected with this subject, with which the country at large seem not to be sufficiently acquainted.

I cannot yet dismiss the feeling, that this is an undertaking of considerable delicacy, and one

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which is very likely to expose the author of it to obloquy and misrepresentation; for, in the survey which it embraces, some things may be exhibited in a light very different from that in which they are viewed by those who have been long accustomed to act upon them;—usages may be called in question, of which the propriety has not hitherto been disputed; and changes may be recommended, of which those whom they chiefly concern have not yet discovered the necessity. Besides, it is not pleasant to have one's proceedings and routine of business made the subject of description or the topic of public discussion; and although the masters of our schools and colleges may have no objections to admit visitors into their class-rooms, and to answer questions relative to their modes and systems of instruction,—there is something in being subjected to a formal scrutiny, to comparison with others, and to the judgment of the world at large, which most people would willingly avoid;—just as it is less disagreeable to be looked at in the street, than to have one's person described in a newspaper.

To all this scrutiny, discussion, and comparison, however, public institutions and public functionaries are unavoidably exposed; and, if decorum and impartiality are attended to in reviewing their merits, and reporting upon their conduct, there can be no just ground of complaint.

Such institutions, in particular, as have for their object the instruction of youth, are open to examination, not only upon the general principle, that every public establishment, as it derives its existence and support from the great body of the people, is continually subject to their review and amendment, according to the maxims of the constitution; but also because the education of every country is closely connected with its character and happiness, and presents the readiest and most efficacious instrument by which to exalt or depress it in the scale of national distinction,—by which to promote or retard the growth; not only of knowledge, but also of those principles which minister to private virtue and support public freedom. It is certainly both allowable and expedient to regard all schools and seminaries of education, as being founded upon principles and guided by rules which have been dictated by the general opinion and good sense of the community; and accordingly to hold it as a general principle, that the things which are taught, and the manner in which they are taught, are still open to their revision, as well as to the introduction of whatever improvements a more enlarged experience may have suggested.

This remark extends not only to schools of modern erection, and those which may be properly denominated national and public institu-

tions, but even to those foundations in the English universities, which originated in the piety and benevolence of private individuals; for if it be maintained, that such colleges were not founded and endowed with a strict reference to the principles and views upon which education was conducted at the time of their respective dates, and, consequently, subject to the changes and improvements which all establishments for education pre-suppose, and are constantly understood to have in prospect,—then it must be admitted, that such individuals were allowed to impose shackles upon a certain portion of national talent in all time coming, and to preclude every chance of improving the means of instruction, so far as their influence could reach. As to the destination of revenue, and the allotment of benefactions, indeed, a man might be permitted to indulge a little whim or partiality towards a particular county or family name, but to have the power of fixing for ever a curriculum of study in a place of national education and of perpetuating the authority of any book or system, or even of enacting that a particular book or system should always make a part of the regular course of study in a college, was both a grievous injury and a flagrant insult to posterity. To assume perfection as the basis of any arrangement for the service of mankind, is to betray both ignorance and folly; and to found uni-

alterably upon the maxims and views of one generation, the statutes of a school intended for all future generations, is at once to exhibit very little confidence in the wisdom of their descendants, and to transmit to them a boon, unaccompanied with the privilege of turning it to the best advantage.

But whatever may be thought of this reasoning, as it respects the college foundations of the South, it will be readily admitted in this part of the island, that the kindness of our ancestors has not precluded improvement nor debarred discussion from matters of education; while, to secure the adoption of what is really good, and the introduction of every practice which has been actually found beneficial, nothing more will be necessary than to point out clearly to the majority of those who have sons to teach, how education might be improved, and at what places it is most successfully conducted. Comparison has, indeed, at all times been disliked by people of the same profession and pursuits; and the odiousness for which it is proverbial, will not probably be diminished in a case where interest is intimately connected with reputation, and where pride will readily engage itself to defend whatever may be attacked, and to justify whatever may be thought inexpedient. Of these laws of human temper, I am quite aware; and an extreme degree of un-

willingness to provoke their operation in a matter which should be examined with the utmost good humour, has, I hope, prevented me from using strong or offensive language, and checked the most distant approach to personality in all that I have written on this interesting subject. To soften, on the other hand, the opposition of those whose opinions do not coincide with mine, I beg it may be constantly kept in remembrance, that it is *institutions*, not *men*, *systems of education*, and not *teachers*, which alone have employed my attention in this survey. In addition to this distinction, which is easily understood, it ought also to be remembered, that the present incumbents are by no means responsible for the methods of teaching and plans of study which are pursued in the seminaries in which they preside; as they act, generally speaking, upon precedents of long standing, and conduct the detail of their duty as their predecessors had conducted it for generations before them. It is this view of my undertaking which has emboldened me to examine and report with freedom; which puts it in my power to praise without directing an encomium, and to blame without pointing a censure, to any individual now alive; and which also leads me to expect, from every one who shall take an interest in this discussion, that candour and urbanity which are indispensable to its success,

Of all the motives which you urge upon me for giving publicity to my letters, that which has the greatest weight upon my mind, is your "decided conviction that people in general, and even the patrons and masters of our schools and colleges, are not aware that there is so much difference in the methods of teaching which are pursued in Scotland, or that improvement in many things is at once so easy and so requisite." Your conviction, I have reason to believe, is not altogether groundless, as it respects the country in general; and the professors, too, perhaps, are more solicitous to do their duty according to the statutes and practice of the university to which they themselves belong, than to be informed how the same branches are taught in other seminaries. For this reason, then, I am not without hope that a little good may be done, by rousing attention to a subject which has not, during a long time, been favoured with its proper share of public interest; and which, either from an impression that no improvements were wanted, or that it would be presumptuous to suggest them, has not had its chance of gaining by the experience and knowledge of this reforming, criticising age. The controversy which was maintained some time ago, between those who attacked and those who defended the University of Oxford, is no exception to this remark; for the strictures and reasonings which were then thrown out, either respect-

ed the abuse of a system which has nothing in common with that of Scotland; or were so general as to have a reference rather to what constitutes a good education, abstractedly considered, than to the means which are any where employed to secure it. Of English education, indeed, we know a good deal more, and entertain, I believe, a much higher opinion than formerly; but of the different modes of instruction which are acted upon in this country, the views which were incidentally given were neither close nor accurate, and tended, I fear, rather to lower than to raise, in public opinion, the academical education of Scotland. The University of Edinburgh has unfortunately been made, in almost every instance, the representative of the other Scottish schools, which, as differing more than any other from the English colleges, and as being in itself the most defective in the means of elementary instruction, has always exhibited a very bad specimen of the manner in which we conduct the philosophical education of our youth. I shall hereafter unfold the ground upon which I have hazarded this observation relative to the university of the metropolis; meantime I feel confident in asserting, that, had the course of academical instruction in this country been viewed through a different medium, or estimated from an actual survey, it would have held a higher place than it holds at present in the opinion of our southern neighbours.

My object in these letters, however, is not to institute a formal comparison between the university education of England and Scotland, but solely to bring into one view the various practices of our own colleges; in order that, having all of them under the eye at once, it may be in our power to form a comparative judgment in regard to their merit, and to adopt such of them as appear, upon the whole, the most likely to answer our purpose. In this I imitate those patriotic agriculturists who improved our system of farming; and who, instead of writing elaborate essays upon the different kinds of soils and manures, and upon the various modes of compounding and exciting the chemical energies of each, instituted a survey of the several agricultural districts, collected into a point the different ways of manuring, ploughing, sowing, and reaping which are followed by the most successful farmers, and thus enabled the cultivator to compare the practices of one district with those of another, and ultimately to fix upon that which was most suitable to his particular circumstances. I have indeed adverted pretty fully, in two or three places, to the practice of the English schools, both in the department of classical learning and in that of philosophy and science, and have not hesitated to express my opinion as to the comparative utility of whatever parts of their system could easily be brought into collation with

our own. But every thing of this kind is merely incidental, or brought in for the sake of illustration. It made no part of my plan, indeed, to indulge in comment or comparison; even upon the Scottish seminaries themselves; for I meant to do little more than to form a connected view of the different plans of teaching which obtain in them; leaving it to others to pronounce on their merits, and to point out to which of our seats of learning in particular the imitation of the rest should be directed. It was perhaps impossible to adhere rigidly to this prospectus of my undertaking, and not occasionally to relinquish the province of the mere collector of evidence to enter that of the judge. Still it is to *facts* that I invite the attention of my readers, having no expectation, and very little desire, that my strictures should attract any portion of their notice.

It has been said to me, that a survey of this kind would be better received at the hand of a professional teacher, as such a person would be naturally thought to possess more accurate knowledge of what is actually done in our public schools, and to be better qualified, of course, to suggest improvements, or supply deficiencies, in their curriculum of study. This remark is plausible, but it is nothing more. Professors and teachers are not necessarily better acquainted

than other people with any system or plan of education besides their own; and as the world would not so readily grant to them the merit of being free from interested views and party feelings, a report from any such character would not be, upon the whole, so useful as one from a person who could not be suspected of having private ends to serve, or local prejudices to gratify. Were a professor, in any of our colleges, for example, to publish an account of the plan upon which he and his colleagues conduct the business of their classes, and to compare it with those of the other three universities, he would be instantly overwhelmed with a load of abuse, and his work ascribed to the most dishonourable motives. Such a survey, I am therefore convinced, will proceed under better auspices from the pen of one who has nothing to hope or fear from his attempt; who is more likely, on this account, to be considered a fair reporter, and to obtain a more patient hearing. At any rate, it is of less consequence who does it, than that it be actually done; for, as it seems to me to involve an inquiry of no less importance, than how the reputation of this country for classical learning may be recovered, and our general education improved, it cannot be too soon ushered into public discussion. I am not at all disposed to undervalue the education of Scotland, which is perhaps, at this moment, the best system of instruc-

tion for all classes of the community that is any where to be found :—Still, it strikes me, that it is not equally good over all the country ; that some of our colleges are deficient in points in which others excel ; and that in classical erudition, particularly, we do not possess that eminence which we justly claim in philosophy and science.

I should mention, perhaps, that my observations on our system of academical instruction are confined to the department of *general education*, and respect no other than the classes of humanity, Greek, logic, mathematics, moral philosophy, and physics. Of theology, medicine, and law, no notice whatever is taken ; both because there seems to be but one way of teaching in these fields of study, namely, that by public lectures ; and also because elementary and preparatory instruction, whether we consider the age of the pupil, or its influence upon his general character, is much more important than that which qualifies him for a particular profession. It has indeed been suggested to me, that my arguments for the practice of regular examinations and frequent composition of essays, apply as forcibly to the professional classes as to those of logic and morals ; and it has been asked, if they can be dispensed with in the former, why not dispense with them in the latter ? Now, I willingly grant the inference, that my remarks will apply to the classes of medicine and

law, as well as to those of general education; and there can be no doubt, that, did the great number of students in the former classes not render it impracticable, much benefit would result to the young from recapitulating the principal topics of the lecture in the way of examination, and from the composition of exercises in both Latin and English. With students so far advanced as those in the departments of medicine and law, examination would commonly take the character of only a more familiar lecture, or conversational review of the most important doctrines that had been discussed *ex cathedra*; and in this easy and colloquial method of teaching, questions would be solved, difficulties removed, opinions confirmed, and errors corrected, which cannot be adverted to in the more formal and dignified practice which is usually adopted at present. I am aware, that at least one great professor of law had recourse to this conversational manner of communicating instruction; and it would be injustice not to mention, that several professors in the medical department at Edinburgh hold themselves ready, at the close of their lecture, to answer such questions, and explain such difficulties, as may have been suggested in the delivery of it; and could the practice of conversational examination and essay-writing be easily carried to a greater extent, there is no man who does not foresee its manifold advantages to the young lawyer and

physician. It would render their knowledge more precise and accurate; it would greatly improve their talents and their habits both of composition and expression, and would probably put an end to the whole system of *grinding*, and to the disgraceful practice of paying for an inaugural thesis, and afterwards assuming the credit of having written it.

There is this wide difference, however, between the object of the classes which I have denominated professional, and those which are the proper subject of this review, that, while the intention of the former is solely to convey information on certain principles, facts, or events, that is, in other words, to store the mind with knowledge; the purpose of the latter is chiefly to exercise and cultivate the mental faculties, to bring them into a state of preparation for the acquirement of science, for the relish of elegant literature, and for the enlightened discharge of high professional duties. When to this consideration it is added, that the students in the former classes are farther advanced in life; that they have chosen a profession, and are studying to qualify themselves for it; that their prospects in the world depend upon their diligence and assiduity; and that they cannot be admitted into their respective faculties without affording evidence of professional knowledge, it may be concluded, that they have motives sufficient to secure regularity and atten-

tion. Besides, let it be remembered, a little deficiency in knowledge can be readily supplied in the closet; and he who has neglected to deposit the contents of a professor's lecture in his memory or note-book, may be able, when necessity shall urge him to read, to render his stock of information equal to his professional wants. But none of all these reasons can be urged as an apology for neglecting to exercise the minds of the boys and very young men who attend the preparatory classes of our universities; for he whose faculties have never been brought into action, has no command of their power; and if he should, at any subsequent stage of life, discover his want of knowledge, he has not only a course of study to commence, but also his understanding to train; —he has not only work to perform, but an instrument to prepare. It is, in fact, upon a deep conviction, that more good is to be derived from a regular system of training and exercising the faculties in the various habits of remembering, comparing, judging, and writing, than can possibly be derived from listening to the most learned lectures on logic, ethics, or natural philosophy that I have ventured to found my strictures relative to the university of Edinburgh. If, however, I shall appear to have expressed myself with too much freedom, in regard to this portion of that learned body, let it be ascribed, not to any personal feeling, but solely to a consideration of

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the high place which they hold in public trust, and of the influence which their mode of teaching cannot fail to have upon the character of our national education. The practices of a school, unquestionably the first in Scotland in number both of teachers and of pupils, certainly deserve our most serious attention; and less harm, I am convinced, will result from a minute and prying inquisition, and the exposure of every thing that has the appearance of being wrong, than from indiscriminate eulogy and gratuitous compliment. Freedom of statement is the more allowable too, that there is so little possibility of misrepresentation; for who would venture to state incorrectly that which every person has it in his power to ascertain and detect? The class-rooms of Edinburgh are open to visitors; the majority of those who will read my letters are as well acquainted as myself with every thing I have advanced; while the thousand channels by which the public mind can be instantly addressed, leave not a day for the operation of prejudice or misrepresentation.

It certainly was not my intention to bring the schools of Edinburgh and Glasgow into a comparative point of view, and, as it may perhaps appear, into a competition for public favour and patronage; but as it is impossible to bring two things under examination at once, without af-

forling the means of comparing their properties, so I find, that, even contrary to my wishes, the defects of each have been alternately exhibited in the practices of the other; and the conclusion, which almost spontaneously evolves itself, is, that the grammar-school in the former city, and the university in the latter, are respectively the better institutions for teaching classical learning and the elements of philosophy. As far, indeed, as a plan of education is to be considered as a test of excellence, the system of philosophical study which is acted upon at Aberdeen, would probably gain the greatest number of voices among those who think on this subject; and I regret that my knowledge of its practical details does not enable me to do justice to the thriving seminaries in which it has been adopted.

As a plea, however, in answer to the charge of having acted invidiously, which may possibly be brought against me, let me observe, that my comparative view of our two larger schools contains nothing in it more personal or accusatory, than the various reports which are every day made on Agriculture, Fisheries, and Manufactures; and as every such representation or report takes for its basis the supposition that people are ignorant of the best methods of realizing their views, not that they neglect these methods, there ought to be no suspicion of either censure or blame.

It has been found, in short, that the first step to improvement, in every department of human labour or ingenuity, is to be well acquainted with what is actually known and performed; with the means, the time, and the instruments, which are employed; with all helps and facilities which are enjoyed, and all the obstacles and disadvantages that were encountered;—and as this view of utility is very generally acted upon in these days, and as much of our progress in the arts and sciences is to be ascribed to its operations, why should we not extend it to our schools and colleges, even without the direct consent of those who preside over them?

I have carefully avoided every symptom of theorizing on the subject of education; being quite convinced that no discovery is to be expected by which labour and assiduity will be rendered unnecessary or less indispensable; and that even those innovations, which flatter with the prospect of such wonderful results, will be rejected in proportion as they shall undergo the test of experience and of impartial examination. No age has produced so many works as the present upon this interesting subject; and yet, except in so far as they are calculated to form the moral principles and to regulate the growth of feeling,—in which respects some of them are excellent,—I have not seen a book which ought to

be recommended as a safe and complete guide in all the departments of instruction. Milton, Locke, and Rousseau, found much to censure in the education of their respective countries and generations,—and so will every person who sets up his own conceptions of fitness and utility as the standard by which to judge of public establishments;—yet those great men, with all their characteristic shrewdness and ability, have condemned practices which ought never to be relinquished, and advised changes which ought never to be introduced. Such publications, as well as others of more modern date, are no doubt of great use as containing hints which may be improved by a judicious parent or tutor: but to educate a child, according to any theory which has yet proceeded from the brain of a philosopher, male or female, would be to combine the forcing of the hot-bed, with the cutting, twisting, and fantastical shaping of the Dutch gardener. As experience is indispensable to safety in all reformation which respect public education, that which is actually received ought to be made the basis of whatever is offered as an improvement, and nothing practical should be superseded, but by that which has been practically proved to be better. This precaution applies of course, not to the suggesting, but to the adopting of plausible innovations; and, while we maintain a steady determination to examine minutely and sur-

LETTER II

IN taking a survey of the state of classical learning in Scotland, the grammar schools, and the philological classes at college come naturally under our view together: Indeed, it is not easy to separate them in our consideration; for not only is their object the same and the studies pursued in them similar, but the Greek and Latin classes in several of the universities correspond exactly to the higher classes in one or two of our schools; and boys are accordingly seen passing the fifth and sixth years of their course under the head-master of the grammar school in one city, and in another under the learned Professors of Humanity and Greek. For the sake of perspicuity, however, I shall endeavour to exhibit, in distinct and separate views, the systems of classical instruction which are acted upon in the

schools of Edinburgh and Glasgow; and afterwards state the plan of education which is pursued at the universities to complete the literary studies of our youth. I fix upon the schools of Edinburgh and Glasgow, not only because they are the largest seminaries of this kind in Scotland, but chiefly because the time allowed for a course of study in each may be regarded as the largest and shortest period, respectively, that has yet been measured out in this country for preparing boys to enter college.

In Edinburgh the course extends to five years, and in Glasgow it is limited to four; but in the former city a considerable number of the pupils continue at school the sixth year also, thus passing two years under the rector to whose class they advance, in the ordinary routine of attendance, at the commencement of the fifth. This extension of the school system, which is a pleasing proof that the good sense of parents begins to prevail over the wretched custom, still too general, of sending half educated children to college, enables the rector to communicate to his pupils a very considerable knowledge of the Latin language, and a tolerable acquaintance with the elements of Greek. The sixth year of the course, which is the most important of the whole to the pupil as well as the most agreeable to the teacher, is spent in reading the higher Roman

classics, such as the Georgics of Virgil, the Satires and Epistles of Horace, Livy, Cicero, and a drama of Plautus or Terence,—in studying the laws and constitution of verse,—in translating English into Latin prose, and in writing poetical exercises, either solely with a view to exemplify the rules of prosody in the way of *nonsense verses*, or by composing upon a subject which has been prescribed by the master. One hour a-day is set apart for Greek and ancient geography,—a portion of time, I cannot help regretting, unquestionably too small for the study of that noble language. The progress which has been made in it of late, however, is highly creditable, both to the zeal of the master and to the industry of the pupil; and one naturally laments that the system of the school does not afford the means of prosecuting, to a much greater extent, the study of a language which has always been regarded as at once the proof and the ornament of scholarship.

At Glasgow, as I mentioned above, the grammar-school course is limited to four years; at the end of which the pupils, who are then about the age of twelve or thirteen and consequently possessed of very slender attainments, are sent to college, where they continue the study of Latin, and begin that of Greek,—no regular provision having yet been made to have even the elements of this

language taught at school.* To say that the attainment of boys at the age of twelve or thirteen are scanty and imperfect, will carry no reproach against a teacher among those who are aware of the great labour and difficulty which attend the acquisition of Roman literature; but that there will follow no impeachment of the wisdom and competency of those who act as the patrons and directors of such institutions is more than can be positively asserted.

In four years nothing more can be expected than that pupils so young will have overcome the mere drudgery of grammar rules, and translated small portions of the easier authors, whether in prose or verse; and this is so precisely the case at Glasgow, that it is found necessary, upon their entrance to college, to put into their hands such books as are usually read at schools during the second or third year of the course. I am aware that the boys at the grammar school in that city are carried so far forward before they go to college, as to have read specimens of Virgil, of Horace, and of Livy; but so defective is their

* Since writing the above, I have been informed, that the gentleman who held the senior class last year introduced the Greek grammar.

acquaintance with these authors, and so utterly incapable are they of comprehending their meaning or of relishing the expressions of their genius and humour that the Professor very judiciously turns them back from Livy's history to Cæsar's commentaries, and from the Epistles and Satires to the more suitable study of Phædrus' fables. Is it reasonable to expect that classical scholars will ever be formed where this is the method of conducting their studies ! Does such a system hold out the most distant prospect of recovering the character of this country for accurate philology, for extensive erudition, or for refined and elegant literature ! No expectations could be more groundless, no hopes more deceitful, and I feel not the smallest hesitation in saying, that all the talents and assiduity of the Glasgow teachers must be expended comparatively in vain, until their system of education be placed on a more liberal footing and their course extended to nearly double its present length.

As the schools over the greater part of the country follow the restricted plan of Glasgow more generally than that of Edinburgh, the state of classical learning in Scotland is, of course, in proportionably less fortunate circumstances, and demands more urgently the review and support of its patrons. In the other university towns, indeed, the plan of study is somewhat more ex-

tended than it is at Glasgow ; and at Aberdeen, in particular, the boys continue at school five years. Still, as no Greek is taught and as the term of preparation is, after all, much too contracted, we cannot hope to possess a greater number of good classical scholars than shall happen to be produced by the fortuitous concurrence, in the same individual, of rare industry and perseverance with an ardent love for the knowledge of tongues. As matters stand at present, we can look for nothing above decent mediocrity,—a sort of half-way advancement between ignorance and knowledge,—the *mouthful* of which Johnson spoke when alluding to this subject, while the bellyful must be reserved for those who are nourished and brought up elsewhere.

Of our system, in short, the cardinal evil is deficiency : for classical education is extremely well conducted so far as it goes ; but it goes so short a way that it hardly answers any of the purposes which literature is intended to serve ;—that is, it neither places within the command of the student the stores of wisdom, knowledge, and genius ; for which, among other reasons, the languages of antiquity are learned ; nor opens that source of elegant and rational enjoyment, which is at once the inducement and reward of him who has gained an intimate acquaintance with the best authors of Greece and Rome. In Latin,

we usually make such progress as to be able to read with tolerable facility the writings of the philosophers and historians ; and to catch, with a little more labour, the meaning and wit of poetical composition ; but our reading in these departments is, generally speaking, so confined that few of us are critically acquainted with the constitution and style of language among the higher writers ; and still fewer of us are so familiar with the characteristic diction of the poets and dramatists as to be capable of deriving delight from the perusal of their works, or of illustrating their beauties by note or commentary. With regard to Greek, again, we are enabled by our plan of study to know just enough of it to consult an authority in that language ; and, when guided by a quotation or reference, to ascertain whether the author has really written what we find ascribed to him, and thus to discover its connexion with the rest of his book, and the fairness of its application. The philosophy, the history, the poetry and the drama of Greece are, in these days, studied in their original language by very few natives of North Britain ; and as to criticism and philological discussion on the works of Herodotus, Aristotle, and Sophocles very little is heard among that class of our young men who are hereafter to wear the gowns of theology or of law.

It is not necessary to remind me of the distinguished names which adorn the annals of Scottish literature, or to mention several living characters amongst us who would stand high in any country in respect of classical attainments ; for I speak of the learning of the present day as it regards those generally who belong to the learned professions,—the mass of those who have had a school and college education,—a proportion of our population far exceeding that of any other kingdom. The most ardent lovers of Scotland must admit, that we are, as a body, much inferior to the well-educated people of France, Germany, and England in point of classical knowledge ; and that in Greek our attainments do not entitle us at all to the claim of scholarship.

I mention these facts, of which every candid person who has considered the matter will own the truth, not to depreciate our education or to suggest unpleasant comparisons, but merely because they are the strongest proofs of the deficiency of our school-system, and consequently involve the most urgent reasons for attempting some improvement. I say the deficiency of our *school-system* ; for Greek and Latin must be taught at school or they will not be successfully studied or generally understood anywhere ; and, in order to have classical learning placed on a more liberal and respectable footing, more time and greater

facilities must be granted to the teachers in our grammar-schools than they have hitherto enjoyed.

If, then, the extension of our school-system is so necessary and important, as that it alone is to be regarded as equivalent with improvement in our classical education, it naturally occurs as a question of great interest, What ought to be the limits of this extension, and what is the point of progress in literature at which the pupil would be sent with advantage to continue his studies at college? Before, however, I can give any answer to this question, we must take a survey of the philological classes in the universities of Scotland; inquire into their precise object; endeavour to find out whether there be any thing done in them which would not be better done at school; and, above all, attempt to ascertain what are the advantages which are held out as a compensation for the numerous drawbacks that cannot fail to attend the change of plan and of discipline which takes place at the entry to college.

In general, then, it may be said, that the purpose served by the Latin and Greek classes in our universities is to teach Latin and Greek to boys who were taken away from school before they had learned enough of these languages: But if you ask me, why such boys were taken

away before they had made sufficient progress in this department of study, I shall be extremely puzzled to find a satisfactory reason; and whether there is any chance that they will be better taught in the former than in the latter seminaries, you will be able to form a judgment when I have laid before you their respective means of instruction.

In the *first* place, then, you take the boy away from a school where order is preserved and industry is excited, by discipline and inducements which can have no existence in the quarter to which he is sent: for the dread of corporal punishment and all the powerful machinery of honour and disgrace, of rank and precedence, which are associated with the words *dux* and *booby*, suit not the more dignified regimen of a professor's chair. The weight of such motives upon the youthful mind is universally known to be very great; and they will never be disregarded by him who recollects that those feelings which they excite are found necessary to stimulate human exertion, even when reason is mature and when all the advantages of industry are clearly apprehended; —much more is their operation to be secured and directed where other inducements are so unlikely to be felt; where there are so many obstacles to be removed and so much reluctance to be overcome.

In the *second* place, you take your boy away from a seminary where he was taught five hours a-day, and you send him to one where he is taught about ten hours in the week.

Thirdly. You take him from a school, where he was taught from ten to eleven months in the year, and send him to one where he is taught not more than six, and at two of our colleges not more than five.

Lastly. You take him from a master who heard him read at least once a-day, and send him to one who cannot hear him above once a week, or probably once a month.

I am not at all disposed to overstate matters against the college classes, and can assure you, both from personal knowledge and from the most authentic sources of information that, owing to the great number of students in the philological classes at Edinburgh and Glasgow, a boy of inferior talents and acquirements may remain five or six weeks without once saying a lesson.—There are two ways of conducting the business of a numerous class which I have seen adopted by different professors; of which the first is to call upon every boy in the list, either in the alphabetical order in which the names are enrolled, or beginning at the middle or end, or, at all events, in

such a way as to run over the whole catalogue before any student was examined twice ; and the second is, to confine the business chiefly to the better scholars, from the persuasion that the younger and duller lads would profit more by hearing the lesson well read by others than by blundering over it themselves. The humanity class at Glasgow is conducted according to the former view of utility, the Greek, generally speaking, according to the latter ; and considering that two hundred boys, many of them not twelve years of age, are to be taught from a professorial chair, upon an attendance of two hours a day, and without the aid of any other motive than can be applied to a young gentleman at the university, it is vain to speak of better and worse.

At Edinburgh, as there is no list or catalogue of names, the professors call upon the boys in the order of their sitting, taking it for granted that the same boys occupy the same benches every day ; and I find that, in the Greek class, the students are examined about once a-week, and in the Latin about once a month. I was amused at an answer given me by a young gentleman, to a question which I addressed to him on this subject. I asked him, how often he had been examined in the humanity class during a session of college. He said, he had attended only three months, being obliged to leave town on account

of bad health ; that he had been called upon twice in that time ; but if he had remained one day longer he would have been called up once more. Whether the approach of the third examination might not have aggravated the symptoms, and accelerated the progress of his distemper, is a point which I did not press with the young collegian ; but I was not less surprised at the infrequency than at the certain statedness of this periodical scrutiny...

Here I beg it to be understood, that no blame is pointed towards the professors upon the ground of this most wretched plan of conducting classical learning ; for it is out of the power of the most ardent and zealous teacher upon earth to obtain success in instructing boys of thirteen or fourteen years of age, as a professor is compelled to instruct, limited and hampered in every possible way ; and nothing can be more groundless and unjust than the complaints of partiality and neglect which are sometimes thrown out, both by students who could contrive to be at once idle and ambitious, and by parents who are disappointed in their sons. The fault is entirely and altogether in the system, which, as a method of teaching boys, is radically and incurably bad. Not only indeed is it a bad substitute for a grammar-school, but it proceeds upon a principle, quite inconsistent with the ordinary conceptions

of mankind relative to the management of youth, relaxing the bonds of discipline in proportion as they become more necessary, and withdrawing the ordinary motives to diligence in proportion as they become more indispensable. At a period when it delights them to defy restraint, and at an epoch in their progress when it appears to them quite justifiable to shake off the drudging habits of the school, are our boys removed to an institution where they are left very much to the guidance of their own discretion, and where their success in study must depend, in a great measure, upon the intensity with which they desire it,—a motive which is seldom of permanent efficacy among men, and never among boys.

Every argument which exposes the absurdity and disadvantage of taking a boy from school before he is master of the higher Roman classics, applies with double force to the unreasonable practice which prevails almost universally in Scotland, of postponing the study of Greek until the pupil is sent to college; for if we take into consideration the shortness of the term, and the interrupted nature of university studies, it will appear as approaching to an utter impossibility that a boy who has no other advantages shall ever acquire a competent knowledge of that language. This will appear manifest, I think, from

the following sketch of an academical course for Grecian literature.

The business of the class usually commences with November, from which date, until the end of April, the university pupil is employed in learning the elements of the language and in translating a little easy composition. At this period, however, and at this critical stage of his progress, is he dismissed for six months; during which he may either add to his little stock of words or commit the whole to an easy oblivion, just as it shall be compatible with the circumstances in which he passes this long vacation. The return of another session will call him again to study; of which session about six weeks must be spent in revising and recovering the acquisitions of the former, leaving little more than four months to amass that store of Grecian learning which is to adorn the mind of the college-bred scholar. This is the regular and statutory course of attendance under the Greek professors at three of the universities of Scotland,—a course which, if a student be firmly resolved on his own improvement, or be compelled, by his circumstances in life, to study for the assistance of others, may be regarded as putting him in the way of gaining some acquaintance with the elegant language in question; but if it be viewed as embracing the means of teaching boys, or for spread-

ing very generally the knowledge and love of the Greek classics, it must be pronounced to be the most futile and ridiculous system that could possibly be devised. The fourth university, however, namely that of Aberdeen, seems to be still more chary of its Greek, for it has assigned to it only one session of five months; and at Marischal college, as the professor of Humanity, (who holds the class of the second year,) does not introduce Greek literature into his course, the gentleman who teaches Logic and Moral Philosophy feels himself compelled to supply the deficiency, that the students may not leave college without knowing the alphabetical characters. As I shall have occasion to give a more particular detail of the plan of education at Aberdeen in general, and also to speak of what are called the private classes at Glasgow, we may now now return to the question which was suggested above relative to the extension of school education, and enquire, as was then proposed, Whether it would not be advantageous to carry classical studies somewhat farther than they are carried at present, before boys should be sent to college?

The only difficulty of reasoning on this subject arises from there being no possible advantage which can be urged as peculiar to the plan of teaching Latin and Greek from a professor's chair, and from the total absence of every thing

like an argument for transferring the business of the grammar-school to the university, when that business would be infinitely better done in the former. It seems to be everywhere admitted, that more of Greek and Latin than is taught at any one of our schools is necessary to complete the classical education of our youth at large, and particularly of those who are intended for the learned professions. Now as, from the comparative view which has just been exhibited of the school and college systems, it must appear manifest that the former is better calculated than the latter to make the addition which is wanted, for what imaginable reason would you remove your son from the one to the other? Upon what principle of utility do you take your boy from a master under whom he has studied four or five years, and send him to another to continue the self-same studies two years longer, under every possible disadvantage that can attend a plan of education; for this master has commonly double the number of pupils which the other taught, possesses few of the means of enforcing diligence which that other possessed, and, moreover, does not devote to teaching above one-fourth part of the time which was employed by the others. There is such a clear and decided advantage to the pupil in continuing under a master whose method of teaching is familiar to him, and whom, from long habit, he respects and obeys, that even

that is true.

upon pretty strong proofs of another school being better conducted, I should hesitate as to the change; but in a case where all the advantage lies with the seminary in which my boy has hitherto studied, I should certainly appear to act a very foolish part if I withdrew him from it, to send him to one in every respect worse. This folly would appear more glaring and extravagant, too, as it could be clearly made out that my son was at that stage of his progress, and at that period of his life, at which the peculiar restraints, encouragements, and means of instruction of the school, were becoming more and more useful to him, both in point of actual attainment, and with respect to the formation of those habits upon which his future success in study chiefly depends. It is found from experience, that at those schools which extend their course to six years or upwards, the pupils make more progress in one year, when advanced to the higher classes, than they made in two at any prior stage of the course; and it is painful to see boys at our own schools, who, having overcome the drudgery of elementary study, and just beginning to spring forward to receive the reward of their labours in the rich treasures of Greek and Roman literature, are made to encounter all the disadvantages of a new system of education and discipline, and, in nine cases out of ten, to lose all their ardour and ambition. The boy who said his lesson two or

three times a-day under the eye of his master, stimulated by all the feelings that spring from the love of approbation, the fear of shame in school and out of it, and, above all, from the prospect of honour and distinction at the public examination of his class, will not find that the motives to exertion are increased upon being translated to a seminary where he is examined only once in eight days, or perhaps not ten times in a session, where his neglect cannot be punished, nor his industry well ascertained. The prizes which are given at some of our colleges for *general eminence*, go a certain length to compensate the want of other inducements to diligence and exertion; but those which are given for particular exercises or specimens, as they may be written by a different person from the one who presents them, are productive, perhaps, of more harm than good. At all events, as the school discipline supplies motives of every description, whether to excite, to repress, or to awaken the idle, the turbulent, or the ambitious; as the school education embraces a greater variety of means, and suits itself to the diffident, the slow, and the dull pupil, as well as to him of good talents and industrious habits; and, finally, as the school term, estimating the time actually employed, is nearly four times as long as that of the universities, there cannot be the least hesitation in pro-

nouncing the school superior to the college as a place for classical learning.*

Let it not be imagined that any obstacle arises from want of learning in the teachers of our greater schools; for they are as competent as any class of men whatsoever to convey instruction even in the highest branches of erudition; and it is perhaps not the least inconsistent part of our conduct to demand, in the masters of our grammar schools, qualifications which would adorn the first ranks of literature, and then to abridge the course of education which they are appointed to direct, as if they were incapable of instructing our children in the elements of more than of one language, or of carrying them beyond the mere drudgery of parsing.

What, then, is the ground of this very general preference of the philological classes at college above those of the grammar school? I have been

* The literary session at Aberdeen continues five months, at St Andrew's and Edinburgh six, and at Glasgow the humanity class continues sitting nearly eight months. The Greek class at Glasgow meets on the 19th October, and sits till the 1st May, commonly indeed until the middle of May, but the proper business does not begin until November.

able to discover only one, and it is perhaps more plausible than satisfactory. The majority of those who send their sons to a university, not having themselves had the benefit of a college education, naturally enough invest the idea of such a seat of learning with the most exalted images of accomplishment and polish ; the consequence of which is, they come to a firm determination, that their offspring shall not succeed them in the labours of the warehouse, or assume the functions of the counter, without having trodden six months at least the pavement of a college-court. It is this ignorance of literary affairs, and this silly pride among the wealthy tradesmen of our larger towns, which has occasioned the late astonishing influx of students into the Greek and Latin classes, and which has also brought to pass a very disagreeable and unpromising condition of classical learning in Scotland ;—too many having a smattering, and too many having nothing more.

You may have been led to imagine, from what I have said, that I regard literary classes in our universities as altogether unnecessary in these times, when grammar-schools are so numerous and so well conducted. This is very far from being my opinion : on the other hand, it is my decided judgment, that, although they are very unfit places for teaching boys, or for communicat-

ing elementary instruction, an able professor will at all times render them of the greatest service to the cause of literature. In what manner this might be effected, will be better introduced hereafter. Meantime, I shall give you relief by coming to a close.

LETTER III.

DEAR SIR,

You confess yourself satisfied, that something ought to be done to improve our system of classical education, and agree with me generally, that the extension of the course in the grammar-schools, considered with a reference to this object, would be of the utmost advantage :—which coincidence of opinion gives me so much pleasure that, in order to secure it, I shall endeavour to answer the questions and reply to one or two of the doubtful points which, you say, have been suggested to you by my last epistle. You ask, what addition of time and study I would recommend as supplementary to our present school system, and whether I think it really founded on just views of utility, to devote so long a period of life, as is usually devoted in England, to preparation for the university, and to philology in general ?

Now, although the former question makes me suspect you have forgotten that my undertaking is strictly confined to a survey and report, and that I would willingly leave improvements in education to those who are better qualified to digest them and of more influence to procure their introduction; yet, in answer to it, I shall take upon me to say in general terms, that attendance at school should be sufficiently prolonged to enable the pupil to acquire an accurate and pretty extensive acquaintance with the higher classics in Roman literature; and to have read, in Greek, a considerable portion of *Lucien*, of *Xenophon*, and of *Homer*, a part of *Herodotus*, and a drama both from *Sophocles* and *Euripides*. Such a plan of study would indeed extend to seven or eight years; and I would have it understood, that the elements of Greek should be entered upon at the commencement of the fourth year: which language, from this date, should occupy two hours in the afternoon, leaving three in the forenoon for the prosecution of Latin.

A course of this length would require the appointment of six masters in our greater schools; and, uniting the classes of the fifth and six years under him who, in the ordinary routine, should hold that of the fifth, and those of the seventh and eighth under the rector or senior teacher for the time, we should effectually provide against

the risk of diminished income on the part of the masters; a circumstance which might be apprehended from the diminution that would probably take place in the number of the pupils after the fifth year of attendance. In the advanced stage of their progress which is here assumed, it would be perfectly easy to unite under one master, two classes, each consisting of forty or fifty boys; and if this arrangement did not secure for the teacher a competent income, or if it were found necessary to retain the classes separate for a longer period, the fees might be raised a little upon the commencement of the fifth year. These and several other minor difficulties to which you allude might be easily disposed of, were it consistent with my views to enter into detail; and it is not necessary to remind you that if no improvement be attempted which cannot be previously cleared of all difficulties, and of which it cannot be said that it will not clash with existing practices, we shall never behold any thing like advancement or melioration in human affairs.

Nor am I so apprehensive as you seem to be, that the enlargement of the school-system would materially interfere with the literary classes in college. The number of students in this department might indeed be somewhat lessened; and instead of from three to four hundred, the amount

to which they have sprung up within these ten years at Edinburgh and Glasgow, the philological classes would, perhaps, return to their wonted and more convenient size : but this result, so far from being a ground of objection to the plan which I have ventured to propose, ought to be regarded as a great advantage ; and if you can assign any reason why the professors of language should have larger revenues than those who teach in the higher departments of philosophy and science, it will then be proper to devise means of compensation.

Since I began these letters, there has been put into my hands a small tract on education, written by the gentleman who at present fills the Humanity chair of Edinburgh ; and it gave me no small satisfaction to find, that the views I entertain relative to the necessity of improving the study of Greek had likewise been entertained, and very ably developed by one who has taught so long, and with so much approbation. In an Appendix to his essay he recommends that Greek should be begun at the commencement of the fourth year of the course ; and, after urging many good reasons for the adoption of this measure, he adds : “ Some may perhaps think that by this plan the number of students in the Greek class at the university would be diminished ; I believe it would be increased. Many of those who

attend the grammar-school, and who do not intend following the three learned professions, never enter on the study of Greek. If these acquired at school a considerable knowledge of that language, they would naturally prosecute at the university a study in which they had made so much progress, which was become so pleasant, and of which they could discover the advantages. If the students now do so much under the very able professors of Greek in the several colleges, how much more would they do if the length of the course were doubled, for the course of Greek at school and college would thus be six or seven years?"

I am quite of the learned professor's opinion as to the encouragement and popularity that would result in favour of Grecian literature, from the arrangement which he has recommended; and it is no slight confirmation of the doctrines which I have stated on this very interesting subject to find that another person, long engaged in teaching and intimately conversant with various plans and systems of instruction, had arrived at exactly the same conclusion, both respecting the deficiency of our present mode, and also with regard to the means of improving it. The ground, too, upon which he consoles the incumbents in the philological chairs, is extremely satisfactory; and it shows at once that their case has been advert-

ed to with suitable feelings of commiseration ; and also, that their interests and prospects are in no immediate hazard from the improvement of classical studies throughout the country.

To convince you that my views with regard to the extension of our school system are not visionary and impracticable, I must call your attention, a few minutes, to the practice of the English schools. In the great classical schools of the south, the course of education, if we begin at the lowest form and proceed regularly (without those double removes which are sometimes granted to talent and industry,) up to the sixth, extends to ten years ; but, as a very small proportion of the pupils commence their studies either at Eton or Westminster, the ordinary residence at those seminaries is about six years. Such boys enter, of course, the forms or classes of the third or fourth year. At both the schools I have mentioned Greek is begun about the end of the third year ; and the distribution of time between this language and Latin varies according to the progress of the pupil, till in the sixth form the Greek takes the lead. As I am enabled by the kindness of a friend to exhibit a detailed view of the whole course of study at Westminster, (see Appendix,) I shall confine my remarks in this place to that of Eton.

At this celebrated school the system of instruction is, I believe, quite peculiar, as the business of education is conducted, not so much in the public class-room, as in the chamber of the school tutor. Every boy, accordingly, must be under a tutor; whose office it is to assist him in construing his lesson, to examine his themes and exercises, and, in short, to see that he be prepared for examination by the masters in the public school. These examinations take place four times on a *whole* school-day, that is on the Mondays Wednesdays and Fridays, and do not exceed three quarters of an hour. On the other three days, which are denominated *half* school days, the public meetings are not so frequent; but the pupils on such days are usually employed under the writing master, the teacher of arithmetic and mathematics, or at some other study connected with general education. The number of boys under a tutor varies according to circumstances from one to twenty, and they are formed into small classes, agreeably to their standing, and prosecute their studies together. The fee to this gentleman is eight guineas per annum, and that to the head master is four guineas with a present at leaving the school.

I feel tempted to make a few remarks on this plan of study, which may perhaps further the

general object that I have in view, and will, at any rate, appear less out of place when it is recollected that there is at present a tendency to this very system of things at Edinburgh, particularly after the boys have entered the rector's class. The half of the pupils in this class, and probably a still greater number, are provided with private assistance to prepare them for the business of the school; but as this assistance makes no part of the general system of study, nor is regulated by open and avowed principles, it necessarily interferes a good deal with our conceptions of fairness and justice, in regard to the competition for honour and precedency. Besides, for these very reasons, and because it is not systematic and avowed, the aid which is afforded to boys at the high school of Edinburgh is doubly more expensive than that which is enjoyed at Eton; for, while a pupil at the latter school has the assistance and direction of a tutor several hours a-day for eight guineas a-year, a boy at the former cannot have a private teacher one hour a-day under eighteen guineas a-year. If, therefore, a plan could be arranged to secure for all the pupils attending our larger schools the benefit of private tuition after the manner of Eton, it would, at once, place all the members of a class on the same footing, and prove to the majority of parents more economical than the method which prevails at present. But, it may be asked, is

private assistance so necessary, that means ought to be taken to incorporate it with the system of our public grammar-schools? The fact that it has become so general in Edinburgh might alone be supposed to return a sufficient answer to this question; but, viewing the matter upon its own ground, it may be very rationally doubted whether languages, or indeed any thing, can be well taught on the great scale of public classes, containing from a hundred to a hundred and eighty boys. In all such classes, the rate of progress must be for many children too rapid and for many too slow; and much talent will, of course, remain uncultivated; both from too little being demanded and also from too much. The truth of this remark has been long perceived; but it has been commonly set down as one of the unavoidable evils of a public school, — as a thing to be patiently submitted to because it was amply compensated by the manifold advantages of that mode of instruction. Now, it strikes me that at Eton this objection is in a great measure removed, and that they have succeeded in combining the chief advantages of public and private education to a very desirable extent; for as in the pupil-room the tutor can accommodate himself to the various abilities and dispositions upon which he has to operate, so in the school the boy of talents and ambition will feel himself acted upon by all that spirit of emu-

lation, and all that thirst for distinction, which constitute the characteristic excellencies of a public seminary. To this let me add, that in the large school establishments of this country, as well as of England, boys attend to *say* their lessons rather than to *learn* them; and the time of the master is taken up, not so much in explaining and teaching, as in hearing what his pupils have learned at home. This is very well known to be the case at both Edinburgh and Glasgow, particularly after the second year of the course; and, if there be neither parent nor tutor at home to superintend and assist his endeavours, a boy of ordinary talents is not supplied with that portion of aid which is absolutely necessary to his advancement. In consequence of this part of our system, too, a good deal of time is unavoidably lost; for as the boys do not prepare their lessons in school they must be idle an hour or more at every meeting; and as those near the top of the class have no inducement and least occasion to listen while the rest are going on with the task of the day, it will happen that those are most idle who might be best employed.* At

* At Edinburgh, I have been lately informed, the boys near the top of the rector's class are in the habit of preparing a separate lesson, while the class at large goes forward with the ordinary business.

Eton the pupil-room receives those who are no longer busy in the school; and when they have said one lesson they return to their tutor to prepare another,—an arrangement in the system of that distinguished seat of learning which cannot be too closely imitated by every other which aims at improvement. Four or five hours are spent daily at our larger schools, in merely *saying* a lesson or repeating a task which had been previously prepared, and thus the burden of preparation is thrown altogether upon the evening hours, and the pupil deprived, while employed in this the most difficult part of his duty, of the only legitimate assistance which the system of the school recognises;—namely, that of the master himself. Were, too, the course of study to be lengthened out to seven or eight years, this disadvantage would become more striking; and the necessity of organising a plan for securing private tuition to the pupils, in small classes subsidiary to the public schools, would appear every day more urgent. Exercises and themes would become more numerous,—the readings in both Latin and Greek would become more extensive,—examinations would be more profound and various; so that unless the master of the school was to fall upon the method of the professor, and satisfy himself with a weekly or monthly circuit of his class, he would find himself compelled to call in aid, or to resign part of his duty.

From this brief account of classical education in England, it must appear that the time and the means which are employed there for laying the foundation of literature far surpass those which are enjoyed in our most favoured institutions. We say, indeed, that the English are mere *word* scholars, and allege that they keep a young man poring over the construction of a Greek verse when he ought to be studying a moral theory; but, without entering into the merits of this question at present, it may be easily disposed of by assuming it as a matter beyond dispute, that if classical learning be worth having at all it ought to be as accurate and extensive as possible, and that a youth will not advance the less prepared to the study of ethics and criticism that he is master of the languages in which the greatest philosophers and critics of antiquity composed their works. The point at issue, it should be remembered, is not whether philology makes a proper part of a liberal education, for this is admitted and acted upon in Scotland as well as in England; but it is, whether we ought to introduce our pupils to an extensive and thorough acquaintance with the languages which form the subject of their studies, or stop somewhere short of this state of accomplishment? Now, you will certainly admit, in the *first* place, that it is extremely desirable to do well and completely what

ever we undertake in the way of education; and, *secondly*. That it is a matter of the highest national consequence, to have the candidates for such of our official situations as presuppose literary acquirements well informed in literature. This being conceded, why would you hesitate to adopt those means, or, at any rate, to set apart that portion of time, which has been found indispensable elsewhere, to realize the object which we profess to have in view? Why would you create difficulties to prevent us from availing ourselves of the experience of those who have confessedly surpassed us in this department of knowledge? Ten years make indeed a long course of preparatory study, longer perhaps than ought to be exclusively devoted to the acquisition of Greek and Latin; but if ten years are found necessary at Eton and Westminster to form good classical scholars, by what miracle are they to be formed at Glasgow and throughout the greater part of Scotland, in four years?

There is an unlucky persuasion under which we sometimes appear to labour, and which, as it is calculated to support ignorance and foster pride, it would be well to examine with sincerity and freedom. I allude to the opinion, which seems to be pretty generally held, that eminence in literature is incompatible with eminence in

science, and that an excellent linguist stands no chance of succeeding in the pursuits of natural or moral philosophy. We do not indeed say so in express terms; but regarding the studies connected with literature as comparatively trivial and boyish, and setting up a distinction between the study of *words* and of *things*, we certainly insinuate, that if a youth can readily analyse language and understands the principles of human speech, he incurs a manifest hazard of not comprehending one idea which that speech embodies. This prejudice is too absurd to merit a moment's examination; and it is cherished perhaps, rather because it consoles where there is a consciousness of deficiency, than because it explains appearances or warrants any degree of preference to our present system of school education. If the study of language implies any thing more than declining and conjugating, or the ascertaining and arranging of prosodial quantities, it is downright nonsense to talk of spending ten years in the study of *words*; for unless it be supposed that a young man shall contrive to read history, poetry, and oratorical composition, without permitting himself to advert to what the historian or poet says, or to the manner in which he says it, I cannot imagine a fitter introduction to logic and ethics, or a better foundation for the liberal arts and sciences at large. We al-

lege, indeed, that the English seldom rise above the foundation, and that almost the whole time spent at college as well as at school is devoted to ancient literature. If this allegation be correct, the patrons and guides of academical study in the south cannot be acquitted of undue partiality towards the dead languages; and even if, which I believe to be the fact, the charge shall be found to rest upon their practice of teaching logic and morals through the medium of Greek and Latin authors, it implies such an indifference to modern improvements in education as cannot be ascribed either to liberality or to wisdom. It is unquestionably a most desirable and honourable proof of advancement in scholarship, that a young man shall be able to read easily all that Aristotle wrote on dialectics and ethics: but the moderns have written so much on these subjects that deserves to be known, and, from the experience and discovery which are supplied by time, in circumstances so much more favourable than those in which that great philosopher composed his works, that, to neglect *them* in a course of study, is to refuse knowledge merely because it is of easy access; and to give *him* an exclusive preference, is to shew a superstitious affection for antiquity and Greek abstractedly considered.

All this, however, is premature and will come in better hereafter; and besides, let it be remember-

ed, the judgment which we form in regard to the university education of England has nothing to do with their school system: for, admitting that there is an exclusive attention paid at college to classical learning which involves the sacrifice of more important studies, it does not follow that any plan, which shall improve the course of school education in Scotland, will necessarily alienate our minds from philosophy and science.

I have brought in this sketch of the classical seminaries of England, not with the intention of recommending the adoption of their practices in the detail of teaching, for I know too little of them to justify such a recommendation, but simply with the view of comparing the time which is allowed for a course among them with that which is measured out for the grammar-schools in this country; as the statement of a few facts on this part of the subject will be of more avail than a thousand arguments in support of any particular view,

As matters stand at present, Edinburgh is unquestionably the best classical seminary in this part of the island; and it derives its superiority chiefly from the more extended plan of study, which has been of late very generally adopted, in continuing the boys *six years* at school, and

by introducing, at an earlier period than formerly, the study of Greek. Such of the pupils as attend this course throughout, and afterwards two sessions at college, enjoy nearly the same advantages in point of time that are enjoyed by the students at Eton and Westminster: but while with the latter the attainments which have been thus made are to be followed up with more profound studies at the university, the former, after having made this progress in them, discontinue their philological pursuits altogether; for as philosophy is said to be postponed at Oxford in favour of Greek and Latin, so the student at Edinburgh hears nothing of literature after he has begun to attend lectures on philosophy.

Now, it occurs to me, that it would be a great improvement upon our system, to have the eight years which are devoted to languages, (and the term ought not to be shorter,) spent entirely at school; as, for the reasons which I have assigned, there cannot be the smallest doubt that lads from fourteen to sixteen would make much greater progress under the restraint, the close attendance, and the other powerful inducements of school discipline than in a college, where study must be in a great measure voluntary; and, which is of the greatest importance to be known, there would still remain abundance of duty to be performed by the professors of Roman and Grecian litera-

ture;—much more consonant too with the dignity of their situations than that of listening to boys reading Phædrus and Cæsar, or reciting the alphabet, the nouns and the verbs of the Greek grammar. I cannot, in any way explain what this duty would be so well as by describing the private Latin and Greek classes at Glasgow; to which, as there is nothing exactly corresponding to them in any of the other Scottish colleges, I beg your attention for a few minutes.

In the departments I have mentioned, the professors at Glasgow dedicate one hour a-day to the instruction of the students in the advanced classes, as well as of those who attend their own course of the second year; and at this hour all the pupils are mere auditors, while the professor either reads and explains one of the higher classics of his respective language, or lectures upon grammar, antiquities, and the principles of taste.

In the humanity class, the hour is nearly equally divided between reading and lecturing; and even in the choice of an author to be read, regard is paid not so much to the comparative difficulty of translating his works, as to the scope which he affords for dissertation on the various properties of language, for remarks on ancient manners and usages, and for the elucidation of historical references and poetical allusions. The lectures in

the former half of the session turn on Roman antiquities; in the course of which, the customs and ceremonies of that people are illustrated will fall and apposite quotations from the poets and ritualists. The latter half is usually devoted to lectures on the Belles Lettres, and the rules of composition and criticism; the whole being conducted with a constant reference to the practice of the best writers in ancient and modern times.

In the Greek class, there is a regular and formal lecture; every Monday, on grammar properly so called, Moor's Elements being the text-book; and the rest of the week is employed in reading and explaining the works of the higher poets and orators. Homer and the dramatists engage particular attention, and the essay of Longinus on the sublime makes a very interesting part of the general course of reading and dissertation; which course, to suit the period of attendance in the gowned classes, extends to four or five years. In the arrangement of the hours of study, care has been taken that these private classes shall not interfere with one another or with the philosophical lectures, so that the young gentlemen attending logic, ethics, and natural philosophy, have it in their power to keep up and improve their acquaintance with the ancient languages without any additional expense or the sacrifice of any other study.

Let it not be imagined, that the readings which I have mentioned are the meagre verbal translation which gives the meaning of an author and nothing more; for they are not only accompanied with a careful analysis of words and sentences into their etymological and grammatical principles, but are also made the subject of interesting speculations on the laws of human thought and feeling,—on the progress of refinement and intelligence among the nations of antiquity,—on their legislation government and customs, their manners in peace and their practices in war,—and, in short, on every thing that is suggested by the literature of those renowned states which spoke the Greek and Roman tongues. The students in these classes have presented to them the philosophy of language and the theory of universal grammar; and the whole business is calculated, not so much to add to their stock of literature or mere vocabulary of words, as to supply materials for reasoning on those faculties of mind which carry men to produce and to admire works of genius—for tracing distinctions in style to certain habits of thought and characters of feeling in nations and individuals—for pointing out beauties of universal acceptation, as well as the varying hues of local and transitory ornament which circumstances alone could have recommended—for explaining, in short, the canons of catholic taste and criticism, and thus establishing their autho-

nity on the basis of knowledge, as well as on that of faith and tradition.

Subjects are also very frequently prescribed in both classes for prize exercises, and the students of all standings are invited to compete. The *patria potestas* among the Romans, the constitution of their armies, the different orders and official powers of magistrates, prose translations from Tacitus and Cicero, with poetical versions from Horace or Juvenal, are among the subjects which are proposed in the Latin class. In the Greek, there are a good many similar topics prescribed; but critical analyses and illustrations of Homer, and poetical translations of choruses from the Tragedians, constitute more frequently the exercises of the student in this department. It is unnecessary to mention, that such essays and exercises, that they may not interfere with the regular and appropriate business of the more advanced students, are altogether voluntary.

Were there introduced a little more of history, of chronology, and perhaps also of geography as it respects those parts of the world which were known to the ancients, the private classes of Glasgow would be the model which I should set up for the philological classes in all our colleges; and, in truth, it is difficult to conceive in what other point of view Greek and Latin classes in a

university can be regarded as at all necessary or useful; for at present they are nothing else than wretched grammar-schools, conducted on the worst possible system, and forming one of the greatest bars to the success of classical learning in Scotland.*

I have no intention to conceal that at Edinburgh there is a lecture delivered in both the Latin and Greek classes once a week; and that the students of the advanced departments have it in their power to attend these lectures as well as the whole course of the second year. There is this difference, however, between the provision which is made for the advanced students at the two universities, that at Glasgow there is a distinct and separate course, or, as it is called, a private class, set apart and calculated for them in particular; whereas, at Edinburgh, the student of philosophy, if he wishes to revise his Latin and Greek, has no such class to enter, but must mix, at the public hour too, with boys who have just left the grammar-school. The same is the case at Aberdeen and St. Andrews. The advanced student may attend with the philological students of the second year, and even read with them; but, if my information be correct, there is no separate course arranged for the readings

* See Note A, in the Appendix.

and dissertations which are practised at Glasgow, and which alone are worthy the attention of the young philosopher and divine. In this recommendation of Glasgow, however, let it be remembered, that eulogy must be confined to the private classes; for the defective system of the grammar-school there renders the public Latin and Greek classes at college altogether elementary, and makes it necessary, as I mentioned above, for the professor of the one to teach boys of eleven Phædrus' Fables, and of the other to initiate children in the names and figures of the Greek letters. In fact, the reigning evil is, that the duty of the school-master is transferred to the professor, which compels him, of course, to relinquish his own; and the radical cure will be to restore his proper share to the former, and the latter will soon discover much more useful employment for the time which the academical curriculum places at his disposal.

On this topic, I am not afraid of having urged against me the trite argument of the wisdom of ancestry and the experience of forefathers: for they who founded universities never meant them for teaching Greek and Latin to boys of eleven or twelve years of age, and the debasement of our colleges by a flock of children from the nursery is a thing of very recent origin. I admit, indeed, that Greek has usually been taught at the

university in this country, and that no regular plan has been hitherto adopted for having it taught at school: but this may be easily accounted for by calling to mind, that Greek, till of late, was regarded as an accomplishment almost peculiar to churchmen, for whose behoof the foundation of Greek professorships in all our colleges seems to have been chiefly intended. Besides, in the days to which we are now alluding, the members of our universities were very few in number, the whole body of students at Edinburgh and Glasgow not amounting to much above a hundred; and as every professor carried his pupils through all the branches of study that were then taught, he had an opportunity of knowing their attainments in language as well as every thing else, and of directing their attention to those points in which they were deficient. Many years did Robert Rolloch* preside over the university of Edinburgh with a cane, and teach from thirty to forty youths with wonderful zeal and success; and at Glasgow, men of

* Of this worthy man, when he was principal, it is said, that "he every week chastised faults of public animadversion, wherein, such was the grace of God in his servant, that he acted and prevailed more by grave and pithy admonitions and holy rebukes than by the rod, seldom and not without weighty consideration falling thereon."

no smaller reputation conducted the steps of the under-graduates through all the departments of literature and science, invested with statutory power to incite the indolent and chastise the refractory, in a still more school-master-like manner.* In fact, at no very distant date, the professors in all our Scottish colleges were mere school-masters or tutors; teaching several hours a-day, and sometimes dividing a class of forty or fifty students into two or three subordinate classes, according to their talents and progress, and, without the formality of written lectures, instructing them in the elements of logic, moral philosophy, mathematics, and physics, connecting thus the studies of the whole four years in an unbroken series; revising one session the acquisitions of the former, and building at the end of the course on principles which had been laid down at the beginning of it. If a lad had any share of talents he could hardly fail in such circumstances to be a respectable scholar; and it is likely the majority of the students would carry away a tolerable portion of Greek, and as much philosophy, perhaps, as their master had to give them.

Such arrangements suited well enough the necessities and circumstances of the times. But

* "Laxatis caligis," says the statute.

now every thing is changed ; classes have increased from thirty to three hundred ; schools, better calculated for teaching boys, are erected, and masters competent to instruct them are placed in every considerable town and country parish ; Greek is now esteemed a necessary part of a liberal education, and as it cannot possibly be taught in the short, interrupted period which is allotted to it at college, it certainly deserves consideration whether professors should still teach the alphabet, and expend their talents on the first declension.

I should now proceed to answer your question relative to the usefulness of classical learning, and to consider what is the compensation which it promises for the ten years of the most active and valuable part of life which must be devoted to its attainment ; but having already filled my sheet and, I am sure, exhausted your patience, I shall grant you respite until the arrival of another post. Meantime, I am, &c.

LETTER IV.

DEAR SIR,

ALTHOUGH to enter into a dissertation on the advantages of classical learning be in some measure foreign from the object which I have more immediately in view, yet, as your question implies objections which have been strongly urged by writers of the highest eminence, and suggests considerations which ought to enter into all our reasonings relative to the education of youth, I shall state, in as few words as possible, the principal arguments which have been employed to recommend the study of the ancient languages of Italy and Greece. I give into this the more readily, too, that a good deal of discussion has been maintained of late by very able journalists, respecting the propriety of devoting so much time as is usually devoted in England

to the acquisition of Greek and Latin; and who, in reasoning against a system which probably attaches too much value to classical learning, and involves, of course, the sacrifice of more important knowledge, have made use of language which may be easily turned to the support of that defective scheme of school education against which my strictures are directed. The writers to whom I have alluded, would, however, be injuriously treated, and their arguments grossly misapplied, were they introduced as recommending, that boys who are sent to school to learn Greek and Latin should not have time allowed them to learn the languages thoroughly; and because they have condemned an exclusive attention to ancient literature from eight to twenty-four years of age, their authority should be urged in support of the opinion, that classical learning is sufficiently cultivated in the giddy years that elapse between eight and fourteen. No man of sense would choose to see a youth of twenty pass the whole day writing verses in a dead language, and placing his greatest honour in the discovery of a false quantity or in the correction of a wrong reading; but between this minute and and overdone scholarship and the petty attainments of the boys in this country, there is undoubtedly a point of advancement considerably higher than has yet been fixed upon in Scotland, at which he who wishes both to secure the ad-

vantages of literature and the success of science, would recommend the union of their study.

But to come to the subject in hand, I would have you to recollect, that, by obtaining possession of Greek and Latin, a man gets access to the source whence have sprung more or less immediately, not only the languages of modern Europe, but also the greater part of the literature, the science, and the fine arts which at present adorn this portion of the world. It has indeed been said, that having obtained the sciences and arts of antiquity, the medium through which we have made the acquisition is no longer of any value. But, admitting the justness of this remark, as it respects the knowledge of facts and the reasonings of philosophers, it can have no weight whatever when it is applied to literature,—for literature in its highest and most valuable qualities cannot be transferred from one tongue to another. The argument of a poem, or of an oration, may, it is true, be detailed perspicuously enough in a translation, and the narrative and sentiments may be exhibited to any people whose vocabulary is sufficiently copious to supply a vehicle; but all that constitutes the charm of eloquence and the fascinations of poetry,—the language which delights by its music and its thousand associations,—the ornaments of fancy which seem fresh gathered from nature,—the vigorous efforts of native and unfettered genius which dis-

tinguish the first-rate classics of Greece and Rome, cannot be perceived and enjoyed but in their original expression. Homer was never read but in Greek; and he is yet a stranger to the beauty, the simplicity, the majesty of Virgil, who has not read the *Aeneid* and *Georgics* in Latin. Who has seen, in any modern tongue, Euripides with all his fire and pathos? And the frequent attempts to translate Juvenal, prove nothing so strongly as that he cannot be translated. Nobody who understands Shakespeare, would take upon him to give his works in a version; and who would think of transferring the characteristic beauties of Burns from his native Scotch. So close, in fact, is the connection between thoughts and words, and so greatly is the one modified by the other, that to conceive all that an author conceived, and to feel all that he felt, you must know accurately the language in which his conceptions were embodied, and in which his feelings were originally expressed. As a rich treasure of intellectual enjoyment, then; and as a source of rational delight, the literature of the ancients should be made familiar to the gentleman and the scholar; for not only did these authors restore to Europe that which the ignorance and superstition of the dark ages had taken away,—the love of elegant composition and the principles of an uncorrupted taste,—but they still serve as standards and exemplars in every department

of fine writing, and are still pointed out for imitation to every one who aims at excellence. In the words of the able writers to whom I have alluded, " We may still borrow descriptive power from Tacitus, dignified perspicuity from Livy, simplicity from Caesar, and from Homer some portion of that light and heat which, dispersed into ten thousand channels, has filled the world with bright images and illustrious thoughts. Let the cultivator of modern literature addict himself to the purest models of taste which France, Italy, and England could supply, he might still learn from Virgil to be majestic, and from Tibullus to be tender; he might not yet look upon nature as Theocritus saw it, nor might he reach those springs of pathos with which Euripides softened the hearts of his audience."*

Not only, however, is the acquisition itself of classical learning an object of the utmost importance, but it is scarcely of less value when considered as the means of affording exercise and culture to the mind during the process of acquiring it. Before young men can enter upon the study of the abstract sciences, it is necessary that their understandings shall have been subjected to regular exercise, and the faculty of attention

* Edinburgh Review.

strengthened by habitual application; and no subject surely could be devised more suitable for this purpose than the ancient languages, which being constructed with so much regularity as to exhibit the order and connection of a complete system, and, of consequence, demanding an unceasing recurrence to first principles, inure the mind of the student to habits of accurate thinking, and prepare it for the enlarged and general views of philosophical pursuits. Whether we regard minute and clear distinction in the conceptions of time and manner as they relate to the various states of action and existence which are expressed by the verb, or the ingenious practice of combining several elements of thought in compounded words, or, lastly, the elegant and lucid arrangement of the several parts of a sentence, so as to give full meaning and effect to the ideas of the writer,—there is no language of modern times which can rival that of the Greeks, and none, of course, so well calculated to exercise the judgment and improve the taste of the young. Language, too, being a representation of thought and sentiment, it is impossible to study the literature of any people without at the same time becoming acquainted with the intellectual habits and laws of feeling which prevailed amongst them; and as the Greek exhibits, in a long series of authors, a progress of refinement, from the simple style of Homer to the laboured

which was devoted to the attainment of that little, but we also contract habits very unfavourable to future improvement in general knowledge. The school education which alone will prove of advantage, must be so extensive as to enable the pupil to read with ease the best authors of antiquity ; and, from a minute knowledge of the customs, the ceremonies, and events to which their writings bear frequent allusions, to appreciate their talents for description, for humour, and for narration. Any plan of instruction short of this, may indeed qualify a person to understand the terms of science which are derived from Greek and Latin, and to trace a portion of modern language à certain length towards its source ;—accomplishments so insignificant as not to deserve the name of learning, and so little removed from the mere elements of scholarship, as only to denote its deficiency and to render more glaring the neglect into which it has fallen. If, then, we are desirous of rising above this meagre and contemptible condition of classical learning, and to secure for our youth enlargement of mind, elegance of taste, and the enjoyment of the most sublime and pathetic productions of human genius, we must set apart more time for the cultivation of the ancient languages than we have hitherto bestowed upon them, and, above all, extend the system of our grammar school education ;—where alone improve-

hereditary admiration, or from the pride of accomplishment." * "Mr Addison," says Tickel; "employed his first years in the study of the old Greek and Roman writers, whose language and manner he caught at that time of life, as strongly as other young people gain a French accent or a genteel air. An early acquaintance with the classics is what may be called the good-breeding of poetry, as it gives a certain gracefulness which never forsakes a mind that contracted it in youth, but is seldom or never hit by those who would learn it too late. He first distinguished himself by his Latin compositions, and was admired as one of the best scholars since the Augustan age, in the two universities, and in the greatest part of Europe, before he was talked of as a poet in town." †

These uses of classical learning are, however, quite incompatible with the hurried and perfunctory manner in which it is commonly taught in Scotland. Nor is the evil resulting from our system merely that of deficiency in elegant literature, for it is attended also with this most pernicious consequence, that it leads the student to rest satisfied with surface views of things; and, by learning so little, we not only lose the time

* Beattie on Classical learning.

† Tickel's Life of Addison.

til they shall be fit for business. Now, as this want of occupation is supposed to occur long before boys are instructed as they ought to be in their native language, before their penmanship is good, or their knowledge of arithmetic extensive; before they have learned geography, or acquired any notion of history and chronology, it may be suspected that useful employment is not found merely because it is not sought after. It may not be improper, however, farther to suggest to such parents, that when the subjects which I have mentioned are exhausted, the elements of mathematics, with practical geometry, the more simple doctrines of natural philosophy, and the popular parts of natural history, will afford more suitable exercise for the minds of their boys, and store their memories with more appropriate knowledge than can be gained from the smattering of a language which they are immediately to forget.

It must, perhaps be admitted, that there is no seminary under public patronage in our larger towns, at which boys who are not intended for a learned profession might spend advantageously the time that elapses between their leaving the common English school, and their entrance into the shop or counting-house. An institution, comprehending the study of modern languages, mathematics, geography, the outlines of natural

and civil history, together with the grammar of our own tongue, is a supplement to our public schools greatly to be desired. A seminary of this kind would be of the greatest use, merely if we regard it as placing within the reach of the middling classes, those branches of education which I have enumerated, and which, although more generally useful, are doubly more expensive than Latin and Greek. French alone is four guineas a-year, geography as much; whereas, were an academy founded in our large cities, under the authority and patronage of the magistracy, the whole might be taught at one-third of the expense. There are several very distinguished seminaries of this description scattered over the country, of which the more celebrated are those of Perth, Ayr, and Inverness; and, in order that the object and extent of their plan may be more generally known, I have inserted in the Appendix a very clear and satisfactory account of the first of these institutions, which was obligingly transmitted to me by the rector.* But the advantages of such a school would not be confined to economy and convenience; for of the great number of boys who are sent to study Latin and Greek, upon the old ground of having nothing else to do, many will be so disgusted with the unsuccessful drudg-

* See Appendix, No IV.

ery of grammar rules, as to contract an aversion to every kind of literary application whatsoever, and being constantly near the bottom of their classes are very apt to lose confidence in their abilities, and give way at once to indolence and despair. This is not a matter of hypothesis introduced to give effect to the recommendation which I have ventured to state; but it is a result confirmed by daily experience, and imprinted on the recollection of thousands. And, let me add, the time which is thus spent, is worse than lost; for education, if it does not advance, must be retrogressive; and the boy who has been long unsuccessfully employed both contracts bad habits as to his general character and becomes a prey to confirmed idleness.

I readily grant, that it is a matter of considerable difficulty in all cases, and in many cases altogether impossible to detect the bent of a boy's genius and to estimate the quality of his talents, until he shall have been subjected to the influence of discipline and emulation in company with his fellows: on which account, the most discerning parents must send their sons to school in the ordinary routine of education, and will have to sustain, as well as others who are less intelligent, the mortification of seeing them waste their time, and turn from their tasks with disgust. I farther admit, that it would be

both injudicious and hurtful to give way to the whims or peevishness of a boy, and merely because he felt exertion to be painful, and restraint irksome, to depart from a settled plan of instruction. Still, after all these concessions, a thousand instances will occur to every one who has had the management of a school, where violence has been done to nature by an obstinate perseverance on the part of parents, who, instead of relieving the pupil from a tormenting and useless drudgery and directing his attention to some pursuit better fitted both for his inclination and talents, have persisted in having him booby for a course of years, and ended by getting him home a confirmed and refractory dunce. The remark of Dr Johnson, that almost every boy is flogged into Greek and Latin, is not true, and it rests upon a principle which ought to be very sparingly reduced to practice: for every teacher knows that the success of his pupils is not always in proportion either to his severity or the painfulness of their own application, and that there are many unsuccessful boys to whom severity would be downright cruelty as well as the most ineffectual incitement. A year or two will commonly afford the means of judging whether a child is likely to do any good at a grammar-school; and as soon as it is manifest, either that his talents are defective, or his inclination decidedly averse to such pursuits, it would be prudent

to vary the subject of his studies. Nor would I listen to the general but very senseless remark, that it is difficult to find employment for the mind of a boy except in the learning of languages; for it will be found by those who take the trouble to make the experiment, that there is scarcely any mind that will not be attracted by some particular study; and I have observed, that such boys as we are now speaking of are not unfrequently captivated with mathematical inquiries and the problems of mechanical philosophy.

Scotland has long been famed for the universality of her classical education, and the rudiments of Latin have been almost as generally taught as the rudiments of religion—a fact in our national history which, so far from promoting and encouraging the study of classical learning, has contributed to bring it into neglect and contempt. I am very far from insinuating in what I have just said, that we ought to discountenance the study of the classics at our parochial schools, or that every opportunity and every degree of encouragement should not be given to boys of genius and enterprise in the lower ranks of life: on the contrary, nothing would give me greater satisfaction than to see those seminaries still more kindly fostered by the care of the public, and a greater number of inducements and facilities presented to the ingenious and ambitious among our

youthful peasantry. I object merely to the practice of sending almost indiscriminately every male child, whose parents are above the labouring class of the people, to undergo the painful drudgery of committing to memory the rules of a Latin grammar, and to sacrifice four or five years of his existence to a pursuit which is ultimately to be of no service to him. It is folly to urge that the grammar of the English language is much better understood by those who have studied that of the Latin: for, according to this mode of reasoning, we should attend a course of anatomy to learn to carve a fowl, and study the tight-rope in order to acquire a ready and elegant equilibrium of the body. The greater number of languages a person learns the better informed he will no doubt become in the theory of human speech, in the general principles of composition; but for all practical purposes a boy may be sufficiently instructed in the grammar of his vernacular tongue without the aid of Ruddiman or Vossius, and a person may be very diligent in the detail of mercantile transactions without knowing that the word journal is derived from *dies* a day, and be a person of the utmost consideration although he has still to be informed that the term originally meant to group stars, or assign boundaries to constellations. Every one admits, that school instruction ought to be suited to the probable destination of the pupil; and

as the pursuits of trade and merchandise are quite incompatible, both with the length of time which must be devoted to the attainment of a complete classical education, and also with the habits and predilections which such an education almost necessarily produces, it would certainly be much more advisable to direct the studies of such boys as are intended for business to the knowledge of facts geographical and historical, to mechanics and practical mathematics, than to waste their time in acquiring a mere smattering of a dead language.

On this very important subject, I have perhaps entered more into detail than was altogether requisite, and expressed myself with more freedom than my experience in matters of education may appear to justify ; but freedom of inquiry will never injure the reputation of an established system so far as it is founded in wisdom, and freedom of discussion will never give offence to those who are more willing to be found in the right than to avoid examination. The advantages which have been pointed out as flowing from a good school education, will, I hope, prove an inducement to cultivate it more extensively among those to whom the want of it ought to be reckoned a disgrace ; and the remarks which respect the indiscriminate practice of teaching every boy a little Latin, will be understood to

imply, not that Greek and Roman literature is of no value, but merely that it cannot possibly be acquired without sacrificing what is of infinitely more consequence to all who are not to exercise learned professions, and that it is much better not to learn a thing at all than to learn it superficially. The 'little learning' in this department, if not dangerous, is, at all events, a very useless thing;—and that will be a great improvement in our system of national education which shall give more classical knowledge to those who ought to have it, and direct the attention of those who have no use for it to subjects more intimately connected with their probable destination in the world. In my next we shall advance to the philosophical classes, and consider at some length the various practices which are adopted in this part of the island.

LETTER V.

MY DEAR SIR,

IN the curriculum of study which is established in three of our universities, logic engages the attention of the student immediately after the languages; and it is taught by a professor, who delivers a lecture on it five days in the week, during a session of about six months. At Aberdeen, logic is not introduced into the course at so early a stage, but is postponed until the young men have been conducted through the study of history, mathematics, and natural philosophy. As I have been favoured with a particular and elegant description of the whole plan of study which is prosecuted in the philosophical college of St Andrews,* I shall confine my observations in

* See Appendix, No. III.

this letter to the methods of teaching philosophy in Edinburgh and Glasgow respectively : but before entering into this survey, I shall trouble you with a few remarks on the LECTURE-SYSTEM at large, as it has been commonly regarded of late as quite characteristic of academical education in Scotland. By the term *lecture* is here understood a written discourse, pronounced by a public teacher; which being an acceptance of the word not generally received in the south, and consequently productive of confusion and mistake in reasoning about our modes of teaching, I have thought proper to define it. As I am endeavouring to obviate misapprehension, let me also add, that, as I have not had personal and actual acquaintance with the plans of instruction which are followed in the English universities, and am perhaps somewhat under the influence of partial feelings towards those which are adopted in this country, my remarks must be received with due allowance and weighed with suspicious caution. The danger on this head, however, is not so great now as it was several years ago, when this subject was first discussed by us. Like the greater number of young men, I was so much struck with the display of knowledge, the appearance of original thinking, and with the eloquent manner which commonly accompanies the lectures of a professor, that any other mode of teaching seemed to me quite incon-

sistent with the dignity of a university, and altogether unworthy of a philosophical magnificence. A little reflection, however, and some reading, have considerably abated my enthusiasm in the cause of public lectures; and I am now convinced, our mode of instruction is so far from being decidedly and exclusively the best, that many powerful reasons may be urged in support of the system which is prosecuted at Oxford, Cambridge, and Dublin, by means of text-books and college-tutors.

It should be premised, at the same time, that the question which relates to the comparative utility of the two systems depends very much, in the *first* place, upon the subject to which the attention of the student is directed; and, *secondly*, upon his previous acquirements, and the general object which is kept in view in the process of education. If the object of instruction be classical or mathematical learning, there can be no question that the English method is to be preferred to ours; because a teacher can examine ten or twelve pupils more minutely and frequently than he could examine two hundred; and because without daily and minute examination in these branches of study, it is impossible to secure success. If, again, it be the intention of the teacher to communicate a precise and accurate knowledge of the principles and doctrines

of any particular system or work—the dialectics or ethics of Aristotle for example—there cannot be the smallest doubt that the English plan must again be pronounced superior; because it is very clear that the most effectual way to gain this object is to put these treatises into the hand of the student,—to read them over with him—to converse with him on the leading points of doctrine and illustration—to make him draw out an abstract of the arguments which they contain—and to subject him occasionally to a public examination, with a view to render him emulous, and to afford him a standard of his proficiency in the attainments of others. So far then, that is, as far as the languages, mathematics, and the study of particular books are considered, no one will hesitate to admit that the college-tutor is a much more useful teacher than the public professor, and that the pupil-room is more likely to secure the improvement of twelve or fifteen students than the class-room that of ten times the number.

But if, on the other hand, the object of education rises above classical learning and the doctrines of any one writer, whether in pneumatology or ethics, and extends to the doctrines of pneumatology and ethics at large, and as they have been treated of by the more celebrated authors of every age and nation, the English method of reading and abridging will no longer suit the

views of the student, as it would require a much larger portion of his time than is allowed for academical residence to peruse and digest the numerous works which it would be necessary to consult. The business must now be carried on by lectures, properly so called,—and these, to be useful, must contain, not the private opinions of the professor himself—not a new theory or complete system of philosophy, but the outlines of a course on the subject to which they relate—a sketch of the more important or remarkable theories which have been maintained, whether in ancient or modern times, with copious references to the sources whence he himself had drawn his materials, and to the most approved authors whose works should be consulted by the students. These remarks apply with greater force in proportion as the department of education which we bring under our review is higher and more difficult; and when we ascend to political economy, jurisprudence, the principles of government, and all the other abstruse inquiries which, in Scotland, are classed under the head of moral science, the text-book and the tutor will be of comparatively little value.

It is to be expected, too, that the lectures of a professor, whose eminence in his particular department had marked him out for his office, will afford a clearer light, and more extensive infor-

mation to the student, than the discourses of a tutor in a college, who being commonly a young man, and employed in teaching several branches of learning, cannot possibly be very eminent in them all. His reading cannot be so extensive; his views so enlarged, or his language so elegant and worthy of imitation, as those of a person whose life has been devoted to improvement in one field of inquiry, and whose labours are still directed to one point in the wide field of scientific pursuit.

All this is readily admitted by the supporter of the English system; but he will add, that the education which has just been described is not the education of a very young man; and that to bring under the review of a lad of sixteen all the theories of pneumatology and moral science which have exercised the ingenuity of learned men, would be no better than the exhibition of objects in a magic lantern; evidently calculated to feed his vanity, but not at all to lay the foundation of knowledge and future improvement. If we wish to teach logic and morals, he would subjoin, fix upon some system of either, and make that the text-book; and having communicated the fundamental principles as they are contained in your author, go abroad to seek illustration, or to meet objections in the works of those writers who have attracted the greatest share of public attention.

In this manner you will secure a ground-work for the future studies of your pupil, who, in reading for himself, will always have a standard to which he can refer the tenets and speculations which fall in his way; and who, if he shall get over less ground in this mode of procedure, will be more intimately acquainted with every object which he examines. As to the objection, again, which respects the qualifications of the tutor, he will observe that very splendid attainments are by no means necessary to the successful instruction of youth; and that a very extensive and brilliant display of knowledge, so far from being useful to lads who have still to learn the rudiments of mental science, only dazzles and bewilders them. The familiar and conversational manner, too, in which the tutor communicates his lessons, is attended, he will maintain, with many advantages which do not belong to the more stately and dignified method of the professor; who it may be he suspected in some instances, propounds his doctrines with more regard to his own reputation than to the capacity of his auditors.

He who supports the Scottish system of teaching the elements of philosophy by public lectures, in opposition to that by reading particular authors, will argue that it is impossible in any other way to keep pace with the progress of science and the history of opinion, and that, to teach the

ethics of Aristotle, the metaphysics of Locke, or the morals of Paley, is at best to give only the views of a single writer; and is equivalent to the wisdom of attempting to teach geognosy, by examining an individual mountain or a solitary rock. At the universities of England they appear to rest satisfied with a very narrow view of the science which respects the faculties of mind and the great doctrines of ethics, and willingly confine themselves within the safe limits of an orthodox volume; while at our colleges, we advance with great freedom into the wide field of hypothesis and theory, examine every tenet, canvas every opinion, and are, in fact, more busy in disproving and refuting what is wrong than in establishing what is right. The English tutor exhibits a local picture of a magnificent castle and princely domain, describes minutely all the parts of the building, and all the beauties of the grounds: The Scottish professor holds up the panorama of an extensive and diversified country, gives the name, the distance, and magnitude of any thing which meets the eye, and concludes by bestowing a map of its roads, with directions for travelling over it to advantage. A young man at an English university has marked out for him a few pages of Locke or a few sections of Paley, and his duty is to be prepared to answer such questions upon the passage as his tutor may be pleased to ask; whereas in Scotland the student hears,

lectures an hour long, of which, in most of our colleges, he must give an account both *viva voce* and in writing to the professor, as a proof of his attention, and as a means of his improvement...

Now, whether it is nationality, or some more subtle prejudice which controuls my judgment, I cannot help preferring our large, and liberal plan of studying the science of pneumatology and ethics, to the cramped conceptions and narrow views which must result from the mode in which they are taught in the south. Candour, at the same time, compels me to admit, that our system is quite unsuitable for boys: and that those abstruse inquiries are introduced rather prematurely into our curriculum, as the minds of the students have neither been trained to reflection, nor stored with facts either historical or physical. I do not therefore claim a preference for the lecture-system to the extent in which we act upon it; because a scientific lecture to the majority of young men, without a previous course of preparation, must be totally useless: and it is only perhaps as subsidiary and consequent to such a system of training as that which is followed out in England, that speculative and general views on abstract subjects can be regarded as a judicious part of youthful instruction. This leads me to make a remark which is worthy the attention

of those who can afford to reside both at an English and a Scottish university ; and it is, that the order in which they are usually attended ought to be reversed, and that the tuition of the English college should precede the lectures of the Scottish. The education of Oxford and Cambridge, so far as we regard its object, its discipline, and the method in which it is conducted, is really the education of lads at school ; while that of Scotland, and particularly of Edinburgh, is only fit for grown-up gentlemen, and presupposes more, both in respect of acquirement and industry, than the age of the pupils actually attending can in any manner justify.

But I have formerly insinuated, that Edinburgh, as a school for elementary instruction, is a very unfavourable representative of the other Scottish colleges ; and that they who know nothing more of our academical education than they have learned from the method of teaching philosophy and science in the metropolis, must have formed a very incorrect judgment, both as to its object and detail. As this opinion, however, rests solely upon certain views of utility relative to education, it is fair that I should state them ; because, if my conceptions of usefulness shall be proved to be absurd or fantastical, the system of Edinburgh, will, of consequence, be excellent, in proportion as it fails to coincide with the stand-

ard which I have set up. This, at any rate, I shall advance in the meantime, in support of the views to which I have alluded, that they are acted upon by every school and college in Great Britain, except the distinguished seminary which I have named; and that if the university of Edinburgh has fallen upon the best plan of teaching, she has the merit of exclusive excellence.

There are two views, then, in which we may regard plans of education, and according to which we may regulate our judgments respecting them; namely, as they are calculated to exercise and improve the mind, or as they are intended simply to convey information. This distinction is perhaps not very clear, as the communication of knowledge almost necessarily implies mental cultivation and improvement; but it respects at present the comparatively active or passive state of the pupil's mind during the process of instruction, or the co-operation which is demanded by the teacher on the part of the pupil to make him teach himself. Now, it has all along been my firm opinion, that residence at college is useful to young men, not so much for what they learn as for what they do; not so much for the knowledge of the doctrines and theories which are submitted to their examination, as for the habits of diligence and exertion which are acquired by the regular and constant application of their faculties to a particular subject.

It matters not greatly, in my estimation, what this subject is ; whether it be the philosophy of agriculture or the philosophy of mind, and whether the student be employed for the time on the theory of wind-mills, or on that of moral liberty. The great object is to bring his faculties into exercise, and his talents into cultivation ; and this is done by prevailing upon him to pay attention to a series of propositions relating to a particular topic, to remember their order, their connection, and the conclusion which was made to rest upon them ; and, above all, to make him repeat, in his own language, the arguments which were employed, and the principal objections which were combated. The important thing, in short, is to teach a youth to think, to remember, and to arrange the ideas which you have given him ; while the matter upon which his thoughts are employed, or, in other words, the addition that is actually made to his knowledge is, in the mean time, a consideration of no moment. According to this view of education, the system of a university is bad, exactly as it is deficient in the means of enforcing regular and assiduous application on the part of the pupil ; and this deficiency respects, in my opinion, a matter so radically and essentially important, that no degree of ability in the master, no eminence in scientific acquirement, and no eloquence of manner, can be held as a compensation.

It is on this ground, then, and according to this view of academical instruction, that the plan of teaching philosophy at Edinburgh appears to me to be decidedly the worst with which I am acquainted,—for there is neither discipline nor exertion in any part of it,—every thing is done by the professors, and the students do nothing. I am afraid I shall hardly obtain credit when I say, that the young men at Edinburgh may attend class or not, just as they please, and be idle or busy, just as it shall suit their inclination. No tasks are imposed,—no demand of any kind is made, either upon the memory or the judgment,—no regular exercises are enjoined, and no examinations, either public or private, are practised. The doors of the class-rooms are thrown open at a certain hour, like the doors of a church, and such of the students belonging to them as choose may walk in; where they will hear a lecture as they would hear a sermon, and be allowed the same facility of forgetting it.

What shall we say of such a mode of academical education as this, where the students are mere auditors or spectators, and where diligence and regularity of attendance are left entirely to their own discretion and steadiness. It exhibits about the same share of wisdom, and is likely to produce the same share of success as if a dancing master were to teach his pupils by placing

them round a room, and dancing before them an hour a-day; and the result, too, would be somewhat similar,—for at the end of a year or two the young folks would be able to talk fluently about steps, hornpipes, and waltzes, and of the uncommon ability with which they were executed by their teacher; but as to their own acquirements it would be necessary to say nothing,—for what proficiency in dancing could be expected from children who had never moved their feet according to the rules of that art? To make the cases completely parallel, it is necessary only to grant that the pupils of this professional man shall have liberty to absent themselves whenever they please from the daily exhibitions of his agility; and, like the students of philosophy at Edinburgh, have the privilege of suiting the amusements of the day to the state of the weather.

I have really no wish to indulge unseasonable merriment on this most important topic; but a course of academical education, without either restraint or inducement,—without either the means of enforcing study, or of ascertaining progress,—is beyond all conception absurd, and is both an injury and affront to the community at large. To be just, however, it is incumbent upon me to subjoin, that the deficiencies which I have pointed out, are not so much the consequence of neglect as the result of principle;

and the students at Edinburgh are not subjected to compulsory attendance, or to a regulated plan of study, because such means are not reckoned necessary for their improvement. The views which are entertained here relative to the nature and purposes of a university education, are so different from those which are held almost everywhere else, that the character of a school is estimated, not from its discipline, or the provision which it makes for exertion on the part of the students, but solely from the excellence of the public lectures which are delivered by the professors. In fact, it is the communication of knowledge, and not the exercise and improvement of youthful talent, upon which the patrons of this seminary found their claim of distinction and superiority.

As this mode of reasoning has been frequently adopted in my hearing, not without approbation on your part, and on that of others, whose judgment I respect; and as it turns upon a view of education which appears to me to be both false and pernicious in a great degree, I would have you to recollect, in the first place, that the information which is obtained from the mouth of a professor, might be obtained from twenty other sources; and, secondly, that this is the worst possible way of arriving at clear views or extensive knowledge in any department of science or

philosophy which has not been previously studied. Imagine to yourself a young student seated in the presence of a learned and ingenious man, who reads a written discourse on a very profound subject in moral or natural science. He is willing, we shall suppose, to carry away as much as possible of this discourse, but his memory is not to be trusted with so valuable a deposit; and the only expedient which offers itself is to take notes. If he employs stenography, he is necessarily so much taken up with the mechanical operation of the art, that he cannot attend to the import of what is said; and, at best, he only carries home a book to decypher, of which he may possibly find the contents in others of a more legible character. If he does not write short-hand, he cannot possibly commit to paper more than one sentence out of six; and what he does secure in this way will be so unconnected and dislocated, that it will defy all his efforts to make out the drift of the argument, or the relation of the facts and materials which lie scattered over his blotted sheet. Besides, the actual quantity of information which is conveyed in a session of college, from the diffuse style of illustration which is indispensable in a class of boys, and the constant necessity of repeating one day the half of what was said the day before, must be comparatively very small; so that if the acquisition of knowledge be the object of chief importance in your

estimate of education, send your son to read with a tutor in private, and not to a crowded classroom.

My ideas on this subject coincide so completely with those of a gentleman who has lately favoured the world with some judicious observations on academical instruction, that I cannot refrain from quoting the following paragraph.*

“ However splendid a spectacle it may be, to see hundreds of young men crowded together in a lecture-room, catching every word that is uttered from the chair, as if it were an oracle, and carrying off volumes of notes, far exceeding in size the manuscripts of the professor, I have always doubted whether the instruction that is thus collected, be not more specious than solid. The utility of this mode of instruction several centuries ago was manifest, when there were scarcely any books, and knowledge was confined to a few ; but I should be glad to know, wherever the practice prevails at the present day, how many of those volumes of notes already alluded to are ever studied after they are written ; and if they were, how great a proportion of what they contain might not be found much better

* H. Drummond's Observations.

told in a hundred books; and how much of what is new is mis-stated and unintelligible. 'People,' says Dr Johnson, 'have now-a-days got a strange idea that every thing is to be taught by lectures; now I cannot see that lectures can do so much good as reading the books from which the lectures are taken. I know nothing that can be best taught by lectures, except where experiments are to be shewn. You may teach chemistry by lectures;—you may teach making of shoes by lectures.' Now, although this opinion is not to be understood as denying all advantages to oral over written instruction, yet, upon the whole, there is much sound sense in the learned Doctor's remark. Knowledge is now too generally diffused in books, to leave much to be learned at a university, which may not be learned elsewhere. The great advantage of an academical education arises chiefly from the love of learning which is inspired by the genius of the place,—from the collision of many minds,—from the ardour which hope of distinction kindles,—and from the advice and assistance in the use of books which young men derive from those of more experience than themselves. The knowledge that is actually gained is less to be considered, than the foundation that is laid for future improvement. The habits that are acquired, the associations that are formed, the bias and turn of mind, are of infinitely more importance than a superficial smattering of the

various arts and sciences. The latter may sometimes be more directly and immediately useful in the business of life, but it is from the former only that any real and solid advantage can ever be derived. The one is the seed scattered on the surface of the earth, which quickly springs up and ripens, but is withered and gone before the harvest; the other is the slow, though certain produce, which rewards the labour of the husbandman. "Hæ sunt, qui parva facile faciunt: et audacia propecti. quidquid illic possunt, statim ostendunt. Possunt autem id demum, quod in proximo est: verba continuant; hæc vultu interrito *nullâ tardati verecundiâ*, proferunt: non multum præstant, sed cito: non subest vera vis, nec penitus immissis radicibus nititur: *ut quæ summo solo sparsa sunt semina, celerius se effundunt: et imitata spicas herbula inanibus aristis ante messem flavescent*."* As to discoveries in science, they are quite foreign from the instruction of youth. If they are not completely ascertained, they tend only to mislead; and as it is at best but the elements of knowledge that can be taught, it is of importance to teach, in the first place, those old and established principles that are beyond the reach of controversy; and, with regard to more modern improvements,

* Quinct. Institut. lib. i.

rather to be satisfied with pointing out the best mode of study, than to attempt, in the short period of academical residence, to convey a few slight and superficial outlines of the whole mass of useful knowledge which learning and genius have accumulated in the revolution of ages. Thus it is that the most ingenious man is frequently the worst tutor or professor. Besides, it is obvious, that a lecture, delivered to a popular assembly of several hundred persons, cannot be adapted to the capacities of the whole. The professor cannot, like the tutor of a college, know the previous habits and various acquirements of his pupils, and separate them into small classes accordingly, where he can stop to explain every difficulty as it occurs. In a public lecture, the instruction conveyed may be of great service to those who have made some progress in their studies ; but if the subject be new to them, and still more, if they either trust to it altogether for information, or at best content themselves with hastily referring to the books of which they learn the names and characters from the professors, their knowledge may be extensive, but it must be superficial, their principles ill founded, their deductions rash, and all their habits of thinking unsound. The desultory acquisition of general knowledge may suit some great geniuses, who catch the truth, as it were, by intuition, and can snatch, at one glance, all that is useful and im-

portant in the accumulated wisdom of past ages; but the evils that arise to the ordinary herd of men from a precocious system of education are serious and alarming."

To those who regard education in this light, and expect such advantages from academical residence, the plan of philosophical instruction in Edinburgh must appear both useless and absurd; for here hundreds of young men pass through a course of study, without having been asked a single question, or induced to write a single essay: and they have heard learned lectures and scientific demonstrations, without having afforded one proof to their teacher that they had listened to the one or understood the other.

Having thus exhibited the ground of my charge relative to Edinburgh, as well as that of exculpation and defence, which may be occupied in behalf of this distinguished university, I shall proceed to obviate a remark which has been frequently urged in reply to the representations which I have ventured to make as to the necessity of regular examinations and a constant demand of exercises on the part of the student. It is this: If a young man be inclined to study, he has sufficient opportunity and inducement in the means of instruction which are held out to him in the lectures of a professor; and if he be not

inclined to study, no species of restraint or compulsion would be of any service. Now, this I regard as equivalent with saying, that if the desire of improvement and the love of knowledge be sufficiently powerful in the mind of a youth to overcome the love of ease or of pleasure, he may derive advantage from attending a public lecture. Who would be hardy enough to deny this allegation; but, to appreciate the value of it, let the place be pointed out where such a young man would not improve, and let the combination of obstacles be named which would prevent him from becoming learned. The question, however, will still recur, Is the thirst for knowledge so general and craving, and is the appetite for science so keen and active among young men from fifteen to eighteen years of age—the usual period of their philosophical studies in Scotland—that it may be considered safe and prudent to leave to their operation alone to decide, whether a student is to give personal attendance;—whether he is to exercise his memory and judgment on what he hears;—whether he is to read and write on the subjects which are discussed in the class-room;—or whether he is to do none of all these things? Is it agreeable to the ordinary conceptions of mankind relative to the management of youth, or analagous to the common practice of education, that, in proportion as the temptations to idleness increase, the induce-

ments to diligence should be diminished ; and that as giddiness, contempt of rule and impatience of restraint gain strength, the bonds of discipline should be proportionally relaxed and at length totally destroyed? It is not meant, however, that young men of sixteen or seventeen should be flogged into diligence, and cudgelled to exertion by a professor of philosophy—no ; such a method of stimulating to industry would, in general, prove as ineffectual, as it is indecorous and unnecessary. The compulsion which alone should be applied, must respect moral feeling ; and the stimulants which alone will be of use, must prick the sense of honour and emulation, of disappointment and disgrace. To secure attention and industry in a class of students in logic or ethics, it will be enough that the regimen of the institution enjoin that they shall be examined regularly on every lecture that is delivered ; that they shall write out an abstract of its topics, or an essay on its leading doctrines ; that such essays shall be read aloud, in the hearing of the whole class ; and that prizes, or some honorary distinction, shall be conferred, at the close of the session, upon those who have exhibited the most exemplary deportment, answered most distinctly at the daily examinations, and produced the most meritorious essays. That he may be enabled to answer well at the examination-hour, will be a sufficient mo-

tive to make a lad attentive at the lecture-hour ; and that he may have topics upon which to write his theme, will be stimulus sufficient for the exercise of reminiscence. At three of our colleges, accordingly, a mode of discipline and instruction similar to this is actually adopted : but at Edinburgh there is no examination, no regular demand of essays ; and every one is left to study, or not to study, just as his inclination, unaided and unprompted, shall direct him.

If any thing were wanting to cover with reproach this wretched system of academical instruction, it must be the consideration, that several hundred young men come up annually to Edinburgh, without any one to guide their studies, or keep alive their industry ; and who, as they are, generally speaking, unknown to their teacher even by name, can enjoy nothing of that encouragement and friendly admonition, which are so necessary amid a thousand temptations to idleness and vice. This remark is not, it must be owned, applicable to Edinburgh exclusively ; for at Glasgow, too, the students neither live within the walls of the college, nor are, after class-hours, under the cognizance of the professors, as to private study or regular deportment. But the necessity which is imposed for exertion in the evenings, is at least one check upon idle-

ness and dissipation ; and the familiar business of the examination-hour, which brings the professor and student into closer contact, and constitutes a sort of acquaintance between them, has a wonderful effect in raising the ambition of the latter, in creating in his mind a certain feeling of responsibility towards his teacher, and a general wish to appear well in his eyes.

This great advantage, along with some others, was sacrificed, in a good measure, when the old mode of teaching gave way to the present : for, when the same professor carried a class through all the branches of literature and philosophy, he had an opportunity of knowing the dispositions, the talents, and general character of his pupils ; which enabled him to be more useful, both in communicating knowledge, and in being the guardian of their morals, than another can possibly be, who has a fresh class every session. The evils of the modern system must however be carried to the utmost extent, at a school where the professor can hardly know the features of his pupils' faces, and to whom they, perhaps, never addressed a single sentence but when they paid him his fee. But I have wandered from my subject ; and it is not worth while to return to it until I begin another sheet.

LETTER VI.

DEAR SIR,

I BEGAN my last letter by observing, that Logic follows immediately after the study of Greek, in three of our Universities; and that in the fourth it is postponed until the last year of the academical career.—For the information of such as are not acquainted with the detail of our education, it may be proper to state, that what is taught under this name in Scotland is not at all connected with the Dialectics of Aristotle, or with any artificial system of reasoning whatsoever. Our logical course embraces merely the more simple doctrines of pneumatology, an analysis of the human mind according to the principles of Dr Reid, and afterwards extends to general grammar, the laws of composition, taste, and criticism. A sketch of the Aristotelian logic is indeed usually given, when the attention of the student comes to be

directed to the faculties of judgment and reasoning; but, except in so far as the analysis of the mental powers has a connection with their use in the various acts or habits of the understanding, which we denominate intellectual or logical processes, the business of this class is quite misnamed, and has a closer affinity to moral science than to logic, properly so called. Whether such subjects are the best suited to the previous acquirements of the students, and are most likely to lay a solid foundation for future knowledge and to beget habits of accurate investigation, I am not called upon to decide. We shall therefore proceed to the proper business of this epistle, which is, to exhibit the manner of teaching the above branches in Edinburgh and Glasgow.

In the former of these cities, the professor of logic teaches one hour a-day, which, with very trifling exceptions, is spent in pronouncing a lecture to a class of two hundred students or upwards. Once a-week, or once a-fortnight, but on no fixed day, a portion of this hour is devoted to examination; and, in the course of the session, two or three prize-essays are prescribed, which, being quite voluntary, are written by those only whose ambition, or whose parents, urge them to their duty.

At Glasgow, the logic class is taught two hours a-day, except on Saturday, when it meets only once. Five hours in the week are set apart for lecturing, and six for examination and the reading of exercises. Indeed, such is the regular and unremitting attention which is paid to the examination of the students, both orally and in writing, that the logic class at Glasgow has long been celebrated as affording an excellent model for all institutions where a great number of very young men are to be taught by means of public lectures; and it appears to me to realise the union of the best parts of the English and Scottish methods of teaching philosophy, as far as the very different constitution of our colleges will permit. The prelections of the professor are delivered at an early hour of the morning, and the students meet again in the forenoon to be examined by him on the subject of them; to hear their essays read and criticised, and to have prescribed fresh topics to them upon which to be employed in the evening. In the early part of the session, when composition is still a matter very new and difficult, the exercises are necessarily short; but, in compensation, there is a subject given out almost every day, which being one of the topics which had been discussed in the lecture, every person is compelled to write upon it, and to produce his specimen, be it one page or ten, as a proof of his industry and attention. When the

session is somewhat advanced, subjects are prescribed only once a-week, and the essays are now given up to the professor, who reads them over at home, marks with a pencil every ill chosen word, and every ungrammatical sentence; and bringing a few into the class every day, he reads as much of them as will enable the students at large to form a judgment of their merits, and himself to point out the principal errors which occur either in matter or composition. Sometimes the essay of one student is put into the hands of another, who is appointed to examine it, and to return it together with a written criticism to the professor; to whom appeal is always open if the author shall think himself aggrieved, either by ignorance or unfairness on the part of his reviewer. In short, the students are kept incessantly employed; and as the daily examination and the regular composition of essays present a constant demand upon their industry, so they afford the most unexceptionable criterion of diligence and ability; for, precluding all undue assistance on the part of private tutors, a fair field is thrown open to the competition of youthful talent, and to the exercise of that spirited emulation which can hardly fail to awaken the energies of the most indolent and remiss.

At Edinburgh there is evidently a great defect in the method of conducting the studies of the

young logicians. In the first place, the examinations are very unfrequent, not oftener than once in ten days; and when they do occur they employ but a small fragment of the lecture-hour. Secondly, the essays are not only few but they are voluntary, and of consequence a great many students pass through the class, without having produced one. Such examinations are quite useless, and such exercises are worse than useless; for to take lads by surprise once a fortnight, by putting questions to them on the subjects of eight or ten lectures, cannot possibly do good; and to give prizes to those whom their fellow-students have no means of knowing to be capable of writing the essays to which they are adjudged, will excite feelings very different from those of emulation in the minds of the young men at large. The business of a class consisting of two hundred lads from fourteen to seventeen years of age, cannot be successfully conducted by devoting to examination a quarter of an hour once a fortnight, or by prescribing exercises which the whole are at liberty to neglect. The chief use of examination consists in the motive which it supplies to secure attention while the lecture is pronounced; and the great advantage of prescribing exercises arises not from the certainty that a few boys will write good essays, but from its affording at once a fair field of industry for the whole class, and a criterion of diligence and ability, to

which every individual must refer his exertions. It is very well to have voluntary essays prescribed occasionally, as many boys will be able to do more than could be judiciously imposed upon a whole school ; but to exact no more from the diligence and genius of pupils so young than they themselves are pleased to bestow, is to manifest either very little acquaintance with their character, or very little interest in their improvement.

These strictures, however, respect the system alone of Edinburgh, and not the exertions of any logical professor ; and this system is so bad, that the personal exertions of any individual are not of much consequence. I have been informed, that the late professor attempted to bring the students together a second hour three times a-week, with the view of rendering his examinations more systematic and useful ; but they not feeling themselves obliged to attend, and he not having the power of enforcing attendance, comparatively very few favoured him with their presence. Be this strictly true or not, I do not vouch for it ; but it may be roundly asserted, that there is very little done in public by the students who attend the logic class in Edinburgh,—and there is less done by the students of moral philosophy.

Of this class, which comes next in order, I can have very little to say. There is a lecture deli-

vered five times a week, which, as in the former class, the students are at liberty to attend or not, just as they please;—but there is neither a question asked nor an essay written throughout the whole session.

At Glasgow the business of this class is conducted so nearly upon the plan of the logic class in the same university, that it is almost unnecessary to detail it at length. The professor lectures five hours in the week, and employs six in reading the exercises of his pupils, and in recapitulating and illustrating in various ways the subject of his prelections. He prescribes essays once a-week, which must be written by every individual; besides which, he encourages voluntary exercises on topics selected by the students themselves, either immediately from his lectures, or from subjects closely connected with them. There is another practice kept up at Glasgow, which can neither be too much applauded nor too generally imitated, I mean the custom of setting apart three hours in the week for reading the philosophical works of Cicero and the *Novum Organum* of Lord Bacon,—an exercise which serves the double purpose of making the student cultivate or retain his acquaintance with the Latin language, and of giving the professor an opportunity of setting forth the doctrines of the old philosophy, as well as the principles of the new.

The wisdom and utility of this exercise are obvious in whatever point it may be viewed ; but when we call to mind the extreme youth of the pupils, their general deficiency in literature, and the temptations in which they are placed to neglect it altogether, the propriety, and even necessity of such an arrangement are most striking.*

It is painful to run a parallel between two such schools as those of Glasgow and Edinburgh, which must be viewed as rival competitors for public patronage and reputation ; but in a matter of such paramount importance as national education, every feeling of delicacy must be suppressed. Nothing, then, can be more glaringly obvious, than that the method of teaching moral philosophy at Edinburgh is most futile and absurd. A lecture is pronounced upon a very difficult subject, in the hearing of a hundred and fifty or two hundred boys or very young men ; concerning which they are not once asked a question, not once called upon to arrange their ideas, or to give one proof that they have paid the least attention. No elementary class in any other university of Great Britain is taught in this manner. At St Andrew's, where the moral class meets but one hour a-day, as at Edinburgh, there are examinations and exercises. At Glasgow it meets two

* See Note B, Appendix.

hours a-day, and one is set apart for exertations. At Aberdeen it meets three hours a-day, and the heads of every lecture are dictated to the students, who commit them to writing. Some sort of means, in short, is used every where but at Edinburgh, to ascertain whether the young men know what is going forward, whether they are diligent and do any thing at home, what difficulties they encounter, and what assistance they may require. In our metropolis, however, the professor has done his duty, according to the statutes or practice of the university, when he has ascended his desk, and pronounced a discourse of a proper length; without having satisfied himself that the half of his pupils were present, and without having used any of the ordinary means of teaching. A professor of Edinburgh college, in this respect, appears in his class-room like the itinerant who gives his twenty lectures for a guinea; is happy to see a full meeting; but if the purchasers of his tickets do not attend,—why it is their own fault. Is this the discipline of a school for boys! Has the nineteenth century, so gloriously distinguished for recent improvement, still to blush for this mockery of education! Has the university of Edinburgh, so justly celebrated for professional eminence, and for men who still adorn the records of science, still to answer for such pernicious absurdity! But let me go on.

The natural philosophy or phisic class at Edinburgh, I am sorry to say, is conducted quite in the same way as that of ethics ;—a lecture is delivered five times a-week, which the students are left to improve as they see fit, having neither examinations to attend nor exercises to perform.

At Glasgow, on the other hand, the professor not only delivers a lecture every day ; but he also devotes an hour to go over again with his pupils the subject of it in the way of examination ; and a third hour, three times a week, for a course of experiments. Thus fourteen hours are employed weekly in that seminary, to teach the same branch of science which in Edinburgh is got over in five hours ;—a circumstance which alone would lead to suspect deficiency in the means of instruction which are used in it.

It is quite unnecessary to say any thing more in proof of my assertion, that Edinburgh has adopted the lecture-system of teaching to a much greater extent, and much more exclusively, than any other Scottish college ; and that the plan of philosophical education which is acted upon here, affords a very unfavourable specimen of our academical instruction.

I am astonished that the thousand obvious advantages of regular application to study on the part of

young men, do not induce the patrons of this distinguished seminary to devise means for having the students under their care provided with suitable and constant employment, and also for stimulating them to industry and exertion both in public and private. Is it to be expected that a lad of sixteen will, from the mere love of information, follow a professor through the difficult and abstruse reasoning upon which conclusions in moral or natural philosophy are usually founded? or, taking this for granted, will it be thought unnecessary to supply him with those motives and helps which arise from the inspection and examination of his teacher relative to the opinions he may have formed, the inferences he may have drawn, and the stock of knowledge which he may have acquired? Indeed, without regular and frequent examinations, the professor has it not in his power to ascertain whether or not he is understood by his pupils, whether his arguments are level to their comprehension, or whether, in short, they are deriving any benefit from his lectures. In those seminaries where the detail of teaching is conducted on the plan of Glasgow college, the teacher enjoys several opportunities of discovering to what extent he has succeeded in communicating his ideas, and of correcting what has been misconceived, or supplying what is deficient, which are not possessed by those who teach on the Edinburgh system. At

the examination, the answers of a few will present to him the chief difficulties which have been felt by the whole; and, by going over the subject in different language, by varying the illustrations and by introducing familiar analogies he can hardly fail to render the drift of his reasoning intelligible to every capacity. But this is not all: for prescribing the leading topics of his discourse as the theme of an exercise to be afterwards submitted to his inspection and read aloud in the class, he has another opportunity of guiding the understanding of his pupils to the precise meaning of the doctrines which he had taught, and of throwing additional light upon the obscurer parts of the subject. Experience, which is our best guide in matters of education, has proved to all who have paid attention to it, that without this process of drilling and exercising, a formal lecture upon the abstruse parts of science is of no use to a young man who has had no previous acquaintance with it; and this remark, which is applicable to lectures on every department of philosophy, is particularly forcible when it respects the problems and demonstrations of physics. It is indeed much to be regretted that our mathematical education is so imperfect that all the zeal of a teacher, acting upon the best possible plan, will in general prove fruitless in those parts of natural philosophy where mathematics and algebra are necessary. But at Edin-

burgh the means which are found to be most efficacious in fixing the attention, and accelerating the progress of the youthful mind in the more difficult departments of study, are not employed; and the student who might be induced to put forth all his strength in fair competition with his class-fellows, having no stimulus to rouse him to action, will be in danger of preferring ease to investigation, and present amusement to the hope of future eminence.

I must not, however, conceal the fact, that among writers on education there has been a considerable difference of opinion as to the propriety of making young people compose essays. Milton compares it to the plucking of untimely fruit, and the wringing of blood from the nose. Locke was also against the practice, and employed both argument and ridicule to throw it into disrepute; and, indeed, the exercises against which those great men pointed their strictures were so unsuitable to the talents and information of boys at school, that it required not the authority of their distinguished names to secure their abandonment. The practice alluded to was that of prescribing exercises to be performed in Latin prose or verse, upon subjects with which the pupils, from their age and acquirements, could not possibly be acquainted; and nothing was more common then to see a poor boy at school labour-

ing at an oration or a poem in a dead language, without having two ideas at all connected with the theme which these compositions were intended to illustrate. The result of this unreasonable demand upon the intellectual penury of children was, in many instances very distressing; and tasked like the Israelites in Egypt, to make bricks without straw, they found themselves compelled to go about, as Mr Locke expresses it, begging *sense* of one another,—that is, a few topics, to spin out into a speech or an ode. This was indeed to pluck unripe fruit, and to wring blood from the nose; but the exercises to which I am now soliciting your attention as a necessary part of philosophical education in Scotland, are not incompatible either with the age or the knowledge of the pupil. Our system of essay-writing always pre-supposes the communication of ample knowledge on the part of the professor; who, in demanding written exercises from the students, does not expect new thoughts or striking illustrations, but merely a repetition of his own statements and remarks, clothed in their language. He furnishes them with the *sense*, and his views of profit are solely confined to the manifold advantages which result from the regular and constant exercise of the mental faculties, and from the circulation of knowledge, however trite and common-place, through the understandings of the young.

These advantages appear to me to be twofold, and to respect, in the first place, accuracy and precision of thought; and, secondly, the acquirement of an easy habit of composition, and a facility of expression; and although it may appear superfluous to illustrate these attainments by reasoning or authority, yet, as I have said so much on the importance of systematic examinations and exercises, I hope to be excused should I become a little tedious by dwelling on them somewhat more particularly.

As to the subject-matter of a young man's studies, then, nothing will contribute so much to a clear perception of its nature, and an accurate view of all its bearings, as the art of collecting and composing his ideas. Lord Kames used to say, "If you wish to understand any question, write a book upon it;" and a young person in particular will find, when he sits down to arrange his thoughts on an abstruse subject, that the vague conceptions which float in his mind do not constitute knowledge;—that there is no sequence or connection amongst them;—that objections which he had deemed trivial, now interfere with all his conclusions;—that his arguments have no series or mutual support;—that, in short, he has general views, without facts or instances upon which to rest them. The matter must therefore be examined anew; fresh

sources of information must be laid open ; other authorities must be consulted ; and the general propositions, with the whole process of reasoning and inferences, must pass in review before his understanding. The knowledge which is acquired in this way is not only precise and accurate, but, which is of the greatest consequence, it is all the student's own ; and the labour which he bestowed upon the scattered materials, constituted, according to the language of certain philosophers, the act of appropriation, by which they become his. It is not denied that a young man may occasionally make wrong conclusions after the most careful and extensive examination of premises ; but this circumstance ought not to be urged against the free use of his intellectual powers, otherwise we must refuse to children the liberty of walking, because they sometimes fall and hurt themselves. If, indeed, to pick up knowledge at second-hand were the object of education at a university, this risk of error would be folly ; and memory being the only faculty which ought to be cultivated, the more nearly the student's mind resembled a sponge, the nearer would be its approach to perfection. If the pupil is to be carried on his teacher's back through all the fields of science and inquiry, he will undoubtedly have no use for his own legs ; but what is to become of him when he is laid down at the end of the course ? If,

therefore, a young man wishes to gain information, he must employ his own faculties in the search of it, examine with his own eyes, weigh, measure, and handle every object whose properties he wishes to ascertain, and be beholden to his master for nothing but rules whereby to conduct his investigations. He must also be regular and assiduous in the practice of composition, both to render his attainments accurate, and to impress them upon his mind;—an exercise which will gradually become more easy and pleasant, give him a greater command of his knowledge, enable him to arrange it systematically, and to communicate it with clearness and precision.

This expectation is founded upon that universal law of human nature which makes facility result from the frequent repetition of any act; and as mental habits are acquired in the same way that mere bodily habits (if there be any strictly such) are generated; there is every reason to rely upon its accomplishment. How is it expected that a student shall learn to commit his thoughts to paper with ease and perspicuity, if the composition of essays makes no part of his education? Is it hoped that a young man will learn to compose, by hearing his master read his own composition? If so, we need not despair of seeing Dr Johnson's hypothetical case

reduced to practice; and shoemakers successfully teaching their apprentices by lectures alone. What then would be thought of that shoemaker's brain who, in order to communicate the knowledge of his art to a boy, would hang up an elegant shoe as a specimen of it, and read an elaborate discourse an hour every lawful day to this pupil on the various kinds of leather, with the effects of steeping and beating it,—on hemp, and its manifold properties and uses,—on rosin and bristles, with the proper quantities and magnitudes of each for every particular purpose; with endless dissertations on the opinions and practices of shoemakers of all ages and nations, and on all kinds of clothing or ornaments for the feet, from the Roman sandal down to the Hessian boot? He would be sent to the Lunatic Asylum, and the boy to a master who would put an awl and thread into his hands, and supply him with leather instead of lectures. The wisdom of those, it may be feared, is not much greater, who attempt to teach the Belles Lettres and principles of composition without practical exercises on fine writing; who undertake to teach moral science without using means to make the students either read or write; or who think that the doctrines of physics can be successfully taught, without securing exertion and co-operation on the part of the pupil. There is nothing, indeed, connected with

this survey so surprising, as that a national seminary should have gained any portion of public approbation while pursuing a system of elementary instruction so glaringly deficient as that of Edinburgh; and it can be accounted for only upon the ground, that the distinguished characters of the men who teach have more weight with the public than the plan upon which they conduct education; although the former, compared with the latter, is a thing of very inferior consequence.

If it were necessary on this point to appeal to authority, I would refer to the practice of all the universities in Great Britain; and in order to show that I have no claim to originality in these remarks, I would quote a passage from two writers whose opinions on matters of education are entitled to much deference; I mean Cicero and Quintilian. The author of the Reply to the Edinburgh Reviewers, too, speaking of the necessity of regular essays on composition, says, "The thing itself strikes every one at first sight as reasonable; and the experience of most persons concerned in education bears testimony to its use. Without some exercise in composition, the student who has read even the best authors feels a difficulty and embarrassment in arranging his thoughts on any given subject, in connecting, illustrating, and adorning them. Just as in

the conduct of life, if he has never been accustomed to think or act for himself, although he may have lived among the purest examples, yet when called upon to act or reason, he is apt to be disconcerted, diffident, and confused. In fact, the utility and almost necessity of *practice* is so received a maxim, that we may fairly demand the strongest proof against it before we give way."—"A man," says Dr Johnson, "should begin to write soon; for if he waits till his judgment is matured, his inability, through want of practice, to express his conceptions, will make the disproportion so great between what he sees and what he can attain, that he will probably be discouraged from writing at all." Dr Beattie somewhere, when representing the necessity of making young men think for themselves on philosophical subjects, says, that college lectures are useful, not as they store the mind with knowledge, but as they induce it to put forth its own powers; and he illustrates his position by comparing the mind which merely receives and retains knowledge to a granary, and the one which exercises itself upon that knowledge to a well cultivated field, which returns a hundred fold. But it is not necessary to appeal to any other authority than that of common sense, which dictates very clearly that in every kind of education the pupil must do something as well as the teacher; and that it is quite im-

possible to form any intellectual habit without regular and constant practice. If, therefore, the Patrons of Edinburgh College wish to have education conducted within her walls as it is conducted every where else, and as it must be conducted to be of any use to juvenile students, let them enable the professors of philosophy to teach at least two hours a-day instead of one, and to enforce regular attendance and regular exercises on the part of their pupils. At Glasgow, the philosophical classes are taught two hours every day, sometimes three; at Aberdeen, they are all taught three hours; and why should they be taught only one at Edinburgh, where the number of students is greater than at either? In my next we shall proceed to the consideration of the system of study which is acted upon at Aberdeen, and which you know is different from that of all the other Scottish colleges. Meantime I remain, &c.

LETTER VII.

MY DEAR SIR,

THE order in which the various branches of philosophy are taught at Aberdeen is so different from that of the other Scottish colleges, and the reasons for this difference involve considerations of so much consequence to the general interests of education, that you will excuse me for detaining your attention a short time from the topics which you suggested relative to the public annual examinations at our universities, to direct it to some remarks connected with the system I have just mentioned. I shall, in the first place, exhibit to you an outline of the system itself, extracted from the little work by Dr Gerrard to which I formerly made allusion, which will give you a more correct idea of the plan of study which is pursued at King's and Marischal Col-

leges than you could derive from any other quarter. It is as follows.

“ I. The FIRST year is spent in classical learning under the *professor of Greek*; whose business it is, not only to teach that elegant language in which the sciences were first delivered, and which, by retaining their original terms, and by being used by those great masters whose works are still acknowledged standards in them, must always be regarded as the foundation of knowledge, but to open the minds of youth, by explaining antiquity, by acquainting them with the lives and characters of the chief classic authors, and by pointing out the uses of literature, or the various purposes it serves in life.

“ II. In the NEXT year, as much of the student's time as the professor thinks proper is spent in reading the Greek and Latin classics, both that they may still improve in these languages, the great conduits through which ancient learning is communicated to us, and that, by being conversant with the best authors, they may early acquire a taste for works of genius. 2. They are to be instructed in *history*, both *natural* and *civil*, along with the elements of *geography* and *chronology*, on which civil history depends. The study of these is judged to be a just intermediate step between the study of languages

and general reasonings concerning things. History conveys to a young mind instructions adapted to its faculties, which at the same time open and prepare it gradually for apprehending the conclusions of philosophy. Farther, on the facts that history, especially natural, relates, philosophy, which is but a picture of the real constitutions and laws of things, must be entirely founded. In the prosecution of it there must be a perpetual intercourse between the mind and nature. Philosophy can never be further improved than in proportion as history is perfected; our knowledge in the one and the other must keep pace, for history relates the phenomena, and philosophy explains and accounts for them. The study of history, particularly natural history, must therefore be proper to precede that of philosophy, not only as it opens the mind, but also as it furnishes it with the requisite materials. These are parts of knowledge entirely omitted in the former method of university education, though of the greatest utility and moment in life. And it is, they apprehend, a considerable advantage in their new plan of teaching, that by it these useful branches of study are introduced into the scheme of education. Natural history, besides its advantages already mentioned, is the immediate foundation of almost all the arts of life, agriculture, gardening, manufactures, medicines, &c. The professor to whose share it falls,

does not confine it to mere descriptions of natural bodies, their various classes, characters, principles, and parts; but gives an account also of the various uses of these natural bodies, and of the principles of the several arts in life which depend upon, and are employed about them. Nor is civil history restricted to a narration of epochs and facts, though in that the foundation is laid, but it extends to an explication of the causes of the rise and fall of states, and of the great revolutions that have happened in the world, and to reflections on characters, manners, customs, &c. which constitutes its usefulness in general, and must render it peculiarly advantageous to young persons, by conveying moral instruction by example; by forming a habit of attention to the great transactions of men; by supplying their want of experience by that of others, and by making them in a great measure acquainted with the world before they come to act a part in it. 3. At the same time the students in this class attend the professor of mathematics for the elementary parts, as the knowledge of the mathematical sciences is an absolutely necessary key to the philosophy of bodies.

“ III. As material objects are the most familiar to young minds, and experiments and reasonings concerning them are most level to their capacities, the students, in the THIRD year of

their course, enter on the study of natural and experimental philosophy, and are instructed in its several branches, mechanics, hydrostatics, pneumatics, optics, astronomy, magnetism, electricity, and any others which farther discoveries may add to the parts already cultivated. 2. They are, as far as time will allow, instructed in the principles of criticism and the belles lettres. 3. They at the same time continue their mathematical studies, so as they may go hand in hand with their studies in the different parts of natural philosophy.*

“ In the LAST year of the philosophic course are taught, 1. Pneumatology, or the natural philosophy of spirits, including the doctrine of the nature, faculties, and states of the human

* The professor of mathematics, the first year the students are under his care, explains to them the true principles of arithmetic, teaches Euclid's Elements of Geometry, plane trigonometry, practical geometry, geography, and the first principles of algebra. The second year of their course with him, he teaches spherical trigonometry, spherical geometry, conic sections, and astronomy; and carries his pupils forward to the higher parts of algebra. The third year he teaches the highest parts of algebra, the doctrine of the quadrature of curves, and fluxions, and some parts of Sir Isaac Newton's Principles of Philosophy.

mind,—and natural theology. 2. Moral philosophy, containing ethics, jurisprudence and politics, the study of these being accompanied with the perusal of some of the best ancient moralists. 3. Logic, or the laws and rules of inventing, proving, retaining, and communicating knowledge; along with, 4. Metaphysics.

“ The three professors of philosophy and the professor of Greek attend their students three hours a-day as formerly, during the whole of the session of college, which commences on the first day of November, and ends in April.”

Of the very limited and inadequate provision made for literature, and particularly for Greek, I have already spoken; and it is surprising that the learned men who arranged the above system of academical instruction, did not set apart more than five months for the study of this language, which is universally acknowledged to be quite indispensable to the formation of a literary character, whether it be regarded for embellishment or use. I am aware that at King's there is a second Greek class, which the students on the foundation are obliged to attend two days in the week; and that at Marischal's, the professor of humanity, or, as he is denominated, the first philosophy professor, is allowed to “ spend as much of the student's time as he thinks proper

in reading the Greek and Latin classics." But it is well known that at the former the bursars, who are comparatively few in number, are almost the only pupils who avail themselves of the arrangement I have mentioned; and that at the latter Greek is not at all introduced. Thus it happens that at two seminaries, which the students usually enter about fourteen years of age, Greek is almost entirely neglected; and at Marischal college, in particular, I was sorry to find that even those who were willing had no opportunity to continue the study of that language until they reached the class of moral philosophy, where the professor found it necessary to abstract a little time from logic and ethics to revise the Greek grammar. With regard to Latin, matters are, if possible, still more unpromising; for this language seems not to be read at all at this college; at any rate, not in the regular course of education. My correspondent says, "The students at Marischal's now read no Greek or Latin during either the second or third session." Now, we know the first is devoted solely to Greek; and if there be no Latin read either the second or third session, it cannot be read at all, unless it be admitted in company with Greek into the department of logic and morals. The professor of humanity acts, no doubt, from the views which seem to him most advantageous to his pupils; but as he has three

hours a-day at his disposal, it would certainly fall in with the common-place ideas of utility, and manifest, at the same time, a pleasing degree of deference to the opinions of the distinguished men who formed the plan of education of which he conducts a part, were he to devote one of those hours to ancient literature.

But this is not the object which I had principally in view, when I invited your attention to the Aberdonian system. It is the order and arrangement of the course at large which demands your notice. Logic, as was stated, is not introduced here immediately after the languages, as at the other Scottish colleges; but gives place to history, mathematics, and natural philosophy, during the second and third session, and is afterward taught along with ethical science during the fourth. Now, it strikes me, that much might be said in support of this arrangement; and, indeed, a great deal was said to excellent purpose by the people who formed and introduced it. It would employ too much time to go over their arguments at length; and they seem to rest upon this fundamental position, that the philosophy of body is more suitable than the philosophy of mind to engage the attention and cultivate the faculties of youthful students; and that it is necessary to lay up a stock of knowledge, before entering upon the study of the various kinds of evidence which

induce belief, or the rules of reasoning considered as an art. In other words, it is requisite before you begin to reason, to have something to reason about; and before you set yourself to review and estimate the different species of evidence, and the various kinds of testimony, to have it in your power to recollect instances in which you formed your judgment upon actual examination of proof, and to compare examples of conclusions founded upon different principles of probation. "Logic," it is justly remarked, "is precisely the same to philosophy that works on criticism are to poetry. The rules of criticism are formed by an accurate scrutiny and examination of the best works of poetry. To one who had never read a poem, these rules would be obscure and useless; he could not comprehend them, far less would he be able to form a judgment of their justness, and of the reasons on which they are founded. If one peruses the best poetical performances, he will acquire some degree of taste, though he has never professedly studied the rules of criticism; and he will, at the same time, lay in materials and obtain a stock of examples which may render these rules intelligible to him, and enable him to judge whether they are just or not." These observations illustrate very clearly the relation that subsists between logic and the knowledge of things in general; we must have made the acquisition of a certain portion of sci-

ence, before we can be prepared to understand the method or laws according to which the mind operated in the process of inference or deduction. To make the study of logic introductory to philosophy, is therefore to give it an improper place; and is, in fact, to retain the order and principles of scholastic education, when that education itself has been exploded. No man in modern times regards dialectics as the *organon* or instrument by which knowledge is acquired, or insists that rules of reasoning must be first studied and committed to memory, and afterwards applied to the sciences, moral and physical. Logic, properly so called, is, in reality, very little attended to in any Scottish college; and the classes which take their designation from that term, embrace a species of study partly literary and partly pneumatological, which is denominated a course of logic, rather because it occupies the place of the ancient dialectics, than because it has much in common with that celebrated invention.

Now, it must undoubtedly strike you, that the professors at Aberdeen entertained very just views of education, when they substituted mathematics in place of logic; and thus secured the best foundation in the minds of their pupils for scientific attainments, and the general improvement of their understandings. Mathematics have been almost universally regarded as the most suitable lo-

gie with which to commence a course of academical study, both on account of the vigour and firmness which they impart to the intellect, and also for the quick discernment of sophistry and the love of sound reasoning which they naturally inspire. They afford, indeed, a species of discipline to the mind, which is to be derived from no other exercise; inure it to strict argument, and a rigid examination of particulars; and are calculated, above all, to form that habit of close and undivided attention, without which there can be no eminence in science. The subjects which constitute the preliminary education of young men at the three other universities of Scotland; partake too much of speculation and hypothesis; and tend rather to inflate the mind, than to store it with knowledge. They get too soon immersed in discussions which puzzled Berkeley and Locke, Reid and Hume; and skimming over the various opinions and doctrines which have been successively maintained and exploded by the most ingenious philosophers, they generally carry away nothing from the classes of the second and third years, but a mass of confused notions and indistinct recollections;—of which the ordinary result is a certain shallow and talkative pedantry; and a premature and pertinacious dogmatism on theories of taste and ethical systems. This, in truth, is the knowledge which puffeth up, and

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the more useless and paradoxical it is, the greater is the inflation which it produces.

I certainly do not recommend that the subjects to which I allude should be withheld altogether from the examination of young men at college; but merely that, as they have no tendency to check the loose and careless manner of thinking which is natural to youth, or to beget habits of close and accurate reasoning, they should be postponed until the intellectual character is somewhat formed and decided. The knowledge which is either lost or gained by the ordinary method of study, is indeed, comparatively speaking, of little moment; but the habits of thinking, the taste and predilections which are thus almost unavoidably formed, are matters of the very utmost consequence. Speculative opinions, which have no relation to objects of sense and are incapable of being determined by an appeal to first principles, naturally degenerate either into a wild eccentricity of judgment, or into a deep and settled scepticism relative to the decisions of the human understanding at large. When the mind is once let loose in pursuit of the airy doctrines of pneumatology and moral science, it cannot afterwards submit to be hampered by the closeness of mathematical reasoning, and to ascend step by step the difficult path which leads to strict demonstration. It happens, accordingly, that the greater number of the students at Edin-

burgh and Glasgow neglect mathematics and all the noble sciences which are founded upon them, to such a degree, that, in the natural philosophy classes of both colleges, there are not more than eight or ten young men in a session who can accompany the professor through all the stages of an elementary problem in mechanics or astronomy. In fact, mathematical studies are held in complete contempt by the silly boys whose minds have been seduced and depraved by speculation;—the consequence of which is, that at both seminaries, Euclid is made to give place to essays on moral evidence and theories of virtue, and the *Principia* of Newton are postponed to the fanciful notions of Berkeley and Hume. Thinking on such subjects is pleasant, because every one may think as he chooses, and without any effort;—and when the judgment is tired, imagination takes the reins.

To prevent or correct this loose and unphilosophical cast of mind, nothing could be better devised than the system of academical study at Aberdeen; which gives a decided preference to mathematical inquiry during the second and third years of attendance, and postpones logic and ethics until the concluding session of the course. Natural history is probably misplaced in their curriculum; as it would require more time to know it thoroughly than can be spared at so early a stage of the pupil's progress; and a smattering of mine-

ology, like all other smatterings, will do more harm than good to boys at a humanity class. In all other respects, however, the order and connection which are established among the several departments of philosophy, prove very convincingly, that Dr Gerard and his colleagues consulted, in their "Plan of Education," not only the natural relation and dependence which subsist among the various branches of science, but also the best method of disciplining and invigorating the minds of the students.

It is in the arrangement, too, more than in any thing else, that the system of Aberdeen differs from those of the other universities, for the subjects of study in all are very much the same. But, in a course of preparatory education, of which the chief object is to cultivate the mental powers and to inspire a love and relish for the pursuits of science, arrangement is a point of the greatest importance; for that which comes first in the order of study will probably determine the line of future inquiry, and give a character to all the subsequent operations of taste and judgment. In fact, this is proved to be the case both at Edinburgh and Glasgow, where the favourite exercises are those of metaphysics and morals; at Cambridge, where the students are addicted to mathematics; and at Oxford, where they excel in ancient literature.

Now, as the greatest desideratum in youthful minds is close and accurate thinking,—a strict regard to first truths and the laws of evidence,—mathematical knowledge should take the lead in every course of study. Speculations on moral Liberty and the moral Sense, will come in to better purpose afterwards, when the student has become a little acquainted with the workings of his own mind, and been accustomed to reflect on the motives which carry him to action. Indeed, the nature of things seems to require, that the study of our intellectual and active powers should be delayed, until we have had considerable practice in judging and reasoning; for as reflection upon the operations of our own minds is the only medium through which we can acquire any knowledge of thought and feeling, it is necessary that we should have a stock of ideas and sensations, upon which to exercise that faculty, before we proceed to trace the laws and properties of thought and feeling in general. We perform, it is true, in very early life, all the acts of mind which constitute the subject-matter of pneumatology; but it is late before we can acquire distinct notions of them, or can easily and readily make them the object of our contemplation.

Even in this point of view, then, the Aberdeen system is better than those of St Andrew's, Glasgow, and Edinburgh. It is more skilfully ac-

commodated to the natural openings of the human mind, and to the dependency and connection of the sciences. It is more consentaneous, in short, to the Baconian philosophy ; and it is not easy to discover upon what ground the universities of Edinburgh and Glasgow retained the order of teaching which had been acted upon by the scholastics, after having exploded the systems themselves which those celebrated persons taught. When logic was regarded as the *organon* of knowledge,—the instrument by which the sciences were to be learned,—it was reasonable to begin the academical course with the study of it ; but now, when it is considered merely as the natural history of the human intellect, the review and explanation of its operations, it ought not assuredly to hold the same place.

It would certainly be very desirable to see mathematical studies a little more popular in our two greater seminaries than they are at present ; for as they contain the most perfect example of reasoning, they could not be cultivated without producing the best effects. Almost every writer on education has recommended mathematics. “ In geometria partem fatentur omnes esse utilem teneris ætatibus,” says Quintilian, “ Agitari namque animos, atque acui ingenia, et celeritatem percipiendi inde concedunt.”—“ I mention mathematics,” says Locke, “ as a way to settle in

the mind a habit of reasoning closely and in train. Not that I think it necessary that all men should be deep mathematicians, but that, having got *the way of reasoning which that study necessarily brings the mind to*, they might be able to transfer it to other parts of knowledge as they shall have occasion." At neither of the colleges I have named is geometry a favourite study; and at Edinburgh, attendance on the mathematical professor is not deemed necessary to complete a regular course of education. In the session before last it was conjectured that an ancient statute enjoined such attendance upon a certain class of students; and a decree was accordingly passed by the *Senatus Academicus*, ordaining that thenceforward every young man studying for the church should see the professor of mathematics. This was one step at least towards the encouragement of mathematical science; and some of the friends of true learning had begun to congratulate themselves upon the prospect of its revival: But, unfortunately, at the commencement of last session it was discovered that the said ancient statute had been misinterpreted; and the *Senatus*, with becoming candour and humility, acknowledged their blunder, and rescinded the compulsory ordinance. Students of every description are therefore at liberty, once more, to attend the class of natural philosophy without having studied mathematics;

that is, to listen to the most profound and intricate demonstrations in physical science without having read the Elements of Euclid. The motive which actuated the learned gentlemen was no doubt benevolent and humane. It might be more convenient, they believed, for some lads to study geometry elsewhere; and it would be severe and tyrannical to compel them to pay twice for this branch of knowledge, or to pay *twice as much* for it at the university as it could be had for, every where else. But, if this principle were to be a little extended, what would become of the illustrious corporation of teachers who have thus given to it their sanction! Logic also might perhaps be studied elsewhere at half the money; and if the monopoly of ethics were given up, the present prices, it might be apprehended, could scarcely be supported. The old system of *thirling*, in fact, ought not to be tampered with; for, however distant the mill may be, however scanty the water, and however indifferent the whole apparatus for grinding, customers will still be forthcoming so long as they have no alternative. Besides, this accommodation to our poverty might have shown itself in another point of view; and since their bowels of compassion were actually in motion at the commencement of session 1812-13, the *Senatus* might have withdrawn more than one resolution. It was barely consistent, perhaps, to raise the fees 25 per cent. in

all the classes, and then, for the love of mercy, to exempt the theological students from attendance upon mathematics.

At Glasgow, the affairs of geometry are in the same hopeless, unprotected, and despised condition. The professor is indeed invested with the power of citing to his presence, with a view to examination, every student who has entered the physical class without having attended his, and of remanding him to the Elements if he be found deficient. This, it must be owned, is a kind of check upon complete and total neglect of mathematical knowledge;—but it shows nothing so clearly as the contempt into which this useful study has fallen, and the consequent ignorance which must prevail relative to all the noble and sublime sciences which rest upon it. Adieu.

LETTER VIII.

DEAR SIR,

ALMOST the only topic that remains to be considered, is the public annual examination of young men at college ; and it is a matter of so much importance, that we shall take a pretty extensive view of the various practices which have been adopted in relation to it, both at the English and Scottish universities. So much has been lately written, by the author of the Reply, and Mr H. Drummond, relative to the whole routine of Oxford education, and particularly with respect to the university or public examinations, that it must seem superfluous to say any thing more about them ; and the account of Cambridge, which constitutes the first article in the Appendix to this little volume, is so full and satisfactory, that it cannot require a supplement. From what has been thus laid be-

fore us, then, we see very clearly that the public examinations at both these seminaries embrace a severe and impartial scrutiny into the acquirements of the students; and that those examinations, in particular, which respect academical degrees and honours, presuppose a very close and intense application to study. The first public examination is held at both Oxford and Cambridge upon the commencement of the third year; but "it is also the practice,* we are informed, of most of the colleges in the former university, to examine every student, at the end of each term, on the studies of the term; on which occasion he presents written notes and abridgments which he has formed, and gives an account of other things he has read, connected with the main course of his studies. The chief scrutiny, however, takes place at the examination for the bachelor's degree; when the student has not only this honour in view, but also the high distinction of having his name enrolled in one of the classes of literary or scientific proficiency.

"At this examination the student presents what number of classical authors he pleases, provided they be not less than three, and those of the higher order, including both languages. It is not un-

* First Reply, p. 152.

usual for those who aim at the highest honours, to mention Homer, Pindar, one, two, or three of the Greek Tragedians, and Aristophanes. Thucydides is seldom omitted. The other historians and the orators are also included, according as the student's line of reading has been. Of Latin authors, besides the poets of the Augustan age, Livy, Tacitus, Cicero, Juvenal, and Lucretius are the most usual. In the books that he names he is expected to be well and accurately versed. And although great encouragement is given to an enlarged range, yet a hasty and unscholar-like manner of reading, however extensive it may be, will not obtain reward, and is in fact much discountenanced.* Since this account was written, it is usual, I have been told by a member of the university, for the best informed young men, who are candidates for the first class of academical honours, to take up a greater number of books than is stated by the author of the *Reply*. And of late more particularly, it has been very common for such persons to take up a regular series both of the Greek and Latin historians; in which they are minutely examined with respect to the characters and events recorded by the historian, the chronology, geography, &c. besides

* *Reply*, p. 142.

giving proof of their acquaintance with the language in which the history is written.

“ Of those who are thought worthy of honours, there are two classes in the branch of literature, and two in that of mathematical sciences; and nothing hinders a candidate from being distinguished in each branch. Indeed, this double honour is very frequent. The second class of each department is divided into two parts, an upper and a lower; so that, in fact, there are three classes of honours in literature, and three in mathematics. The individuals of each class are arranged among themselves, not according to merit, but in alphabetical order. It has usually happened, that above one-third of the whole number of candidates have been placed in the list of honours; but of these the far greater part are in the lower division of the second class. All these names are printed: the names of those who simply pass and obtain no honour are not printed. If any candidate is rejected, it passes *sub silentio*. His certificate is not delivered to him.—The school is in general much crowded during the examination weeks, especially when a candidate who enjoys any previous reputation is to appear. In such cases, a strong interest is excited among all orders, and great attention is paid.”

At Cambridge, the examinations are not less

frequent nor less severe; and in order to have a more complete view of the practices of our southern neighbours, I shall quote a paragraph or two from the communication to which I have alluded. "Every subject," says my correspondent, "is perused with the most elaborate minuteness; and, to prevent its being alienated from the mind, as soon as the college lectures on it have ceased, there are, I have already informed you, annual examinations at Trinity (at St John's they are half-yearly,) for the purpose of revising their late acquisitions. These continue three or four days, and are conducted with great diligence; and at the close of the examination a classification is made out, conformable to the ability the young men have displayed."

The details relative to the public examination for the Bachelor's degree are very interesting. "This commences," he observes, "on a Monday morning, at eight o'clock, about the middle of January, and is continued for eight hours on each of four successive days; at the expiration of which, the candidates are arranged in fresh groupes, with the most scrupulous regard to the degree of proficiency they have exhibited during this arduous trial. The examination is then resumed on the Friday, and sometimes continued till a late hour at night. On Saturday morning, the decisive and ultimate classification is append-

ed to the pillars in the senate-house. The impression of anxiety with which this is perused by the young men, will hardly be conceived by any but those who have devoted three years to the keen and continual prosecution of their studies, with the anticipation of this interesting moment always before their eyes.

This catalogue is called the Tripos Paper. It contains generally about forty names, selected from eighty or ninety, the number who annually graduate. The forty are divided into three grades; and the names in each grade are not arranged alphabetically, but according to a scrutiny of their attainments, as exact, minute, and prolonged, as can be considered either practicable or necessary."

But it is chiefly with the annual examinations in our own universities that we are concerned, and in all of them except, Edinburgh, there is a public and formal examination, either at the beginning or the end of every session. At St Andrew's and Aberdeen it takes place at the close of the session, and at Glasgow soon after the commencement of it. It is conducted by two professors in the presence of the principal, and of a great concourse of students.

At St Andrew's, says Dr Grierson, "on the rising of the session in the beginning of May the

students are examined before the university. They are convened in the great hall below the university library, and each professor examines his own class. The two principals and the professors, all attend on the occasion, and strangers are admitted. The examinations commonly last for four days, and are conducted in such a way as to be a very good test both of the abilities and method of the teachers, and of the talents, attention, and proficiency of the students.*"

At both the colleges of Aberdeen, the annual examination takes place, I believe, in the month of March, and is conducted nearly in the same way as at St Andrews; but as I am better acquainted with the practice of Glasgow than of any other university, I shall describe it a little more minutely. Early in the month of December, the public, or *Blackstone*, examination, is begun in the literary and philosophical college, and continues about three weeks; during which time every pupil is particularly and strictly examined on the studies of the preceding year. It commences with the students of the physic class; who are examined on ethics and jurisprudence, by the professor of moral philosophy, in the presence of the principal, the professor of natural philosophy, and of several hundred of the junior

* See Delineations of St Andrew's.

students. The young men attending the ethical class are examined by the professor of logic; those attending the logic by the professor of Greek, and those of the Greek class by the professor of humanity, on their respective departments of study. As ethics and logic are wide fields, and the student exposed to examination on every part of the course over which he had been conducted the former year, the questions are necessarily confined to the general principles and the chief points of discussion; and were it not that he had been trained by regular and incessant examination and composition on these topics, at the time they were explained and discussed by the professor, no young man could be prepared for such a scrutiny in public. That part of the examination on logic which respects the ancient dialectics, is still conducted in Latin; and there is a compend drawn up for this purpose by the logical professor, of which the greater portion must be committed to memory, to enable the student to answer easily and correctly.

In philology the student is allowed to name the authors on which he is prepared to be examined, and before he takes his seat on the black stone, (which is an ancient oak chair decorated with laurel, a gift, I believe, of James VI. to the university,) he presents his card to the examiner, containing the amount of his *profession*. On this

he is strictly and minutely examined; and, as there is a public prize bestowed upon that pupil, both in the department of Greek and Latin, who at once professes the greatest quantity, and answers best the various questions which are put on the construction, the etymology, and the prosody of the language in which he is examined, there is a good deal of competition on the part of the students, and of course a good deal of labour and discrimination necessary on the part of the professors. In Latin, Virgil, Sallust, Livy, portions of Tacitus and Cicero, with a drama of Plautus or Terence, are usually named; and in Greek the New Testament, Xenophon, Lucian, Homer, and a tragedy or two, are not rarely found in the card of those who aim at academical distinction.

This examination, so well known and so formidable to every Glasgow student, was originally instituted to ascertain whether the pupils who had attended one course, were qualified to proceed to that immediately following; and the power of remanding to their studies such as are found unqualified, is accordingly lodged in the *jurisdictio ordinaria*, and perhaps, too, in the professors, who, with the principal, (supposed to be present,) conduct the business of the *black-stone*. This power is indeed

rarely exercised ;—so rarely, that I have heard of no instance ;—yet the assurance that it is possessed, and that it may be exerted, together with the natural desire to excel at an examination so public, renders the black-stone at once somewhat alarming as an ordeal of industry, and a very powerful incitement to its exercise. In fact, the summer is spent in making preparation for this inevitable scrutiny ; and it is only those who can bear unmoved the frown of anger on the countenance of their teacher, and the smile of contempt and derision on the faces of their class-fellows, who will think of it with indifference.

At Edinburgh, however, no such thing is known. Daily and yearly examinations are alike neglected. Among the students here, the glow of emulation and the ardour of competition are never felt. There reigns an uninterrupted stagnation of animal spirits, an eternal sinecure within her walls ; and those young men only who are smitten with the love of science, and pursue her for her own sake, can be supposed to study at all. This is no doubt the best of all motives, but it is neither general nor of permanent efficacy. What wise man thinks of leaving the success of education, or indeed of any thing, to the operation of the cool, solitary feeling of advantage and utility ? The love of fame or dis-

unction of some kind, must mix, more or less, with every motive which is expected to be vigorous and lasting; and if you give stars to commanders, and hang medals round the necks of full-grown men, to reward and excite their exertions, why do you not act upon the same view of human nature with respect to young men at college, and stimulate their industry by addressing their ambition and the love of praise! "The great secret of a liberal education, it has been observed, is to make emulation an active, steady, and commanding principle. Compulsion is as unnecessary as it is ridiculous. It scarcely succeeds even in the nursing; and as we advance in years, is less to be wished for, and is in fact less practicable. Constant admonition, the consciousness of an over-seeing eye, the fear of reproof, and the hope of praise, are indeed of service, are even necessary to overcome the desultory habits of youth, to check its wanderings, to fix its resolutions, and keep it to its purpose. These, however, are secondary and incidental powers; they serve to re-fit and keep the machine in order; but the great spring which moves and invigorates the whole is emulation*. Every other college and university, whether in England or Scotland, acts upon this view of advantage, and upon these principles of

* See Reply.

human nature. They have public and other periodical examinations at Oxford, at Cambridge, at St Andrew's, at Glasgow, and at Aberdeen. At all these seats of learning, the hope of reward, and the fear of shame, are employed to overcome the listlessness and to stimulate the ardour of youth,—and why they should be neglected at Edinburgh, the first of our Scottish seminaries in number both of teachers and pupils, certainly deserves serious consideration.

One advantage of the annual examinations in our colleges, and particularly in that of Glasgow, is, that it compels the young men to attend the classes in the regular order of their succession; for as the student of logic is examined on Greek, the student of ethics on logic, and the students of physics on ethics, attendance on every previous class is thus amply secured. I believe the same order is usually observed at Edinburgh; but it is a matter which rests entirely with the students, and I have known youths attend four classes during one session, of which those of moral philosophy and physics were two. Indeed, the jurisdiction and regimen of Edinburgh are exceedingly lax and inoperative, which gives to it the appearance of an aggregation of separate classes, rather than of a university properly so called. The voluntary attendance of the students, is a strong proof of this allegation, and manifests, be-

beyond all contradiction, either that the professors are not invested with sufficient power, or that they do not exercise it.

Surely it ought not to be left to the option of young men from 14 to 18 years of age whether or not to attend lectures, the only means of teaching which is employed; and the use of a catalogue in each class, as at the other colleges, implies neither any thing very troublesome or disgraceful. The largeness of the classes at Edinburgh has indeed been mentioned as a reason for omitting the use of a catalogue, as it would require, it is alleged, ~~namely~~, half an hour to call names, and collect fines or apologies. Experience however, in such cases, will answer a thousand gratuitous objections; and I can assert, that in a class of 150, of which I was a member, the catalogue was called, and the whole detail of the business disposed of in five or six minutes: for the mere circumstance of being marked an absentee, and reported as such in the hearing of all his class-fellows, proved a sufficient motive to make every individual punctual in his attendance. But were even ten minutes sacrificed to this duty, it would not be considered a waste of time by those who regard punctuality as one of the most valuable qualities that can be impressed upon the youthful mind, and to whom the facility with which young men

at Edinburgh can become idle and irregular must appear the most reprehensible thing which could be urged against a plan of education. This circumstance, insignificant as it may appear, becomes an object of no trivial import when it is recollected that, of the numerous students who repair annually to Edinburgh, there are hundreds who have no guide but their own sense of propriety : and whether the regular attendance of boys and young men, in a place of so much amusement and distraction, ought to be regarded so entirely as a matter of course as to be left wholly to themselves, is a point that does not admit of much controversy.

I now bring to a close my remarks on our education at school and college, by exhibiting a sketch of its expense. The grammar-schools at Edinburgh and Glasgow are on the same footing in this respect, the quarterly payment being 10s. 6d. with an additional fee at Candlemas of the same amount. In the other towns of Scotland the fee varies from 5s. to half-a-guinea ; and in the country it is as low in some parishes as 2s. 6d.

The fees at the universities also vary a good deal, and are payable at present according to the following table.

EDINBURGH.	GLASGOW.	ST ANDREW'S.	ABERDEEN.
L. s. d.	L. s. d.	L. s. d.	L. s. d.
Humanity 3 3 0	Humanity 2 2 0	Human. 2 2 0	Greek 2 2 0
Greek... 3 3 0	Greek .. 2 2 0	Greek .. 2 2 0	Humanity 2 2 0
Logic... 3 3 0	Logi... 2 2 0	Logic .. 2 2 0	Mathem. 1 11 6
Mathem.* 4 4 0	Mathem. 2 2 0	Mathem. 2 2 0	Physics... 2 2 0
Ethics... 4 4 0	Ethics... 2 2 0	Ethics.. 2- 2 0	{ Logic & Ethics 2 2 0
Physics... 4 4 0	Physics... 2 2 0	Physics 2 0 0	
<u>L. 22 1 0</u>	<u>L. 12 12 0</u>	<u>L. 12 12 0</u>	<u>L. 9 19 6</u>

As a complete course at college comprehends two sessions at the classes of Latin and Greek, and one at all the other branches, the education of a young man at a Scotch university will be as follows :

Edinburgh.....	L. 28 7 0
Glasgow.....	16 16 0
St Andrew's.....	16 16 0
Aberdeen... ..	11 11 0

At Aberdeen there are not two sessions of Greek and Latin, I have therefore reckoned two sessions at the mathematical class.

* I have rated the mathematical class at four guineas, which is, I believe, the sum usually demanded; but to prevent mistakes and awkward explanations, (of which I have known several,) it would be well to have the matter determined by authority.

From this *exposé* it appears that Edinburgh is the most expensive of our Scottish seminaries: But the expense of our education is, upon the whole, so trifling, and bears so small a proportion to the general rate of living, that, if her system of elementary instruction were good, this little additional expense would never be mentioned against her. It will be very unfortunate, however, if it shall be proved that the academical education of Edinburgh is both the worst and the most expensive in Scotland. That it is not as good as it might be, has been, I think, made manifest from general reasoning on the principles of education; and that it might be improved, will perhaps appear practicable from the views which have been presented of the methods of teaching which are pursued at every other university.—Adieu.

APPENDIX.

No. I.

ON THE CAMBRIDGE UNIVERSITY.

MY DEAR SIR,

THE request you made me, to draw out a Sketch of the Course of Studies prosecuted by a young man at the University of Cambridge previous to his first degree in arts, I have endeavoured to comply with. I am not certain that I have altogether given such a view as you require of the subject; and less so, that you will be disposed to agree with me in the ~~un~~favourable picture I have drawn: but, on this head, I shall only observe, that, as far as facts are concerned, nothing will be found in the subsequent account but what is rigorously correct. Of my opinions I will speak with less confidence; these you are perfectly at liberty to adopt or reject as you may think fit:

The Cambridge course of education may be considered as embracing three distinct classes of subjects:

—natural philosophy, moral philosophy, and the belles lettres. It is to the first that the predominant attention is devoted; and, as subsidiary to it, mathematics, in all their branches, are cultivated with uncommon ardour. The studies vary somewhat in the different colleges. At the two largest, that is, at Trinity and at St John's, the attention is pretty equally divided between classical and mathematical learning. Though I may remark, that the predilection of the university for mathematical merit is clearly shewn in the distribution of the fellowships, and other preferments, in the gift of this opulent seat of learning. It occasionally, though rarely, happens, that persons of transcendant classical attainments, without any mathematical knowledge, are elected fellows.

After this preface on the general nature of the Cambridge system, it may be best to lay down an outline of the course pursued in an individual college, taking Trinity for an example; since, as I have before observed, there is a small variety in the different societies.

The year commences in October, and is divided into three terms; which occupy, with two short intermediate vacations, from October to the end of May, when the long vacation commences, and continues till the ensuing October. The first year's course is, with some slight modification, as follows:

III

1st Term—A Greek play and Euclid.

2d Term—A Greek prose author, algebra, and arithmetic.

3d Term—Some Latin author, and plane trigonometry.

SECOND YEAR.

1st Term—Mechanics.

2d Term—Spherical trigonometry, conic sections, the gospel of St Luke, Locke, and Paley.

3d Term—Astronomy.

Thus end the two first years ; and the student is now prepared to enter the vestibule of the Principia of Newton. From this epoch his application becomes more intense.

THIRD YEAR.

Principia of Newton, methods of fluxions and increments, higher parts of algebra, arithmetic of sines. Optics and hydrostatics are not included in the collegiate course at Trinity, but are left to be prepared by private study.

This is the prescribed range for the lecturers. Students of better talents, or greater application, will aim at more ; indolent characters will be satisfied with much less. It

may be interesting to you to learn the manner in which the subjects are handled in the lecture-room. For you must know, as well as any body in the world, that the question of importance in a system of education, is not only *what* is read, but *how* it is read. The whole circle of the sciences may be dispatched in a six-months course, and the student be little advanced in actual knowledge. The great object is certainly to engraft and mould the subjects into the mass of our familiar knowledge; and this can only be done by viewing each separate proposition in all its bearings; by frequent recurrence to former acquisitions, and by reiterated revision of all we have learned.

An example of the mode of lecturing, taken from a single subject in natural philosophy and another in the classics, with the addition of a specimen of the annual examinations, which always embrace the series of studies for the expired year, will be a fair way of submitting to you, how far these great objects are likely to be accomplished by the Cambridge course. I have annexed a copy of two papers of questions propounded to the young men of Trinity in May 1813, which I happen accidentally to have in my possession.

Let us suppose the pupil entering on the subject of astronomy. The class meets at the tutor's rooms, who, from the beginning, demonstrates each separate proposition, without omitting a single corollary, and, if

the subject requires it, he exhibits a variety of deductions. The class meets again on the subsequent morning, and is examined very minutely on all that had been commented on the day before. No proposition is passed without an attentive and rigorous demonstration; A fresh portion is given out for the ensuing morning; and in this way the whole subject is exhausted, and another succeeds in the same process. During the perusal of a Greek or Roman author, the pupil is, in the first place, required to give a close and accurate translation. Then are propounded questions relative to chronology, geography, metre or philology, elucidations of abstruse or beautiful passages, parallel readings, authorities for doubtful construction; in a word, every thing that can conduce to a refined and perfect acquaintance with ancient learning, is quoted, discussed, and explained.

Every subject is perused with the most elaborate minuteness; and, to prevent its being alienated from the mind, as soon as the college lectures on it have ceased, there are, I have already informed you, annual examinations at Trinity (at St John's they are half-yearly,) for the purpose of revising their late acquisitions. These continue three or four days, and are conducted with great diligence; and at the close of the examination a classification is made out, conformable to the ability the young men have displayed.

Soon after February, in his third year, an under-graduate receives notice from the moderator, that he is to keep a public exercise in the schools; which consists in defending three questions, of which two are generally mathematical and one is moral. In the course of the day, he writes out such a list as his skill qualifies him to support—v. g.

QUESTIONES SUNT.

1. Recte statuit Newtonus in 7^{ma} sua sectione libri 1^{mi}.
2. Recte statuit Woodius Iridis omnia Phænomena solvi posse ex varia lucis radiorem refrangibilitate.
3. Recte statuit Paleius de humanâ felicitate.

Upon the receipt of this paper, the moderator selects three young men, whom he supposes competent, to oppugn these questions. They are called the opponents; of whom the first brings eight arguments, the second five, and the third three. The respondent occupies a rostrum in the public schools; his opponent an opposite one; and the moderator a third, somewhat more elevated. Each opponent, after he has gone through his arguments, is dismissed with a compliment suitable to the ingenuity he has exhibited; and, last of all, the respondent is released, if he deserves it, with such an eulogy as the following: Domine respondens omnes tuas quæstiones optimè quidem intellexisti, et mirâ felicitate defendisti.

The same pupil appears once more as respondent towards the end of the year, and four or five times in the character of opponent. After he has finished with the schools, he is sedulously employed in what is technically called 'getting up' his subjects; that is, in a repeated perusal and transcription of every thing he has read during the three years, from the humble elements of Euclid to the sublimest theorems of the Newtonian philosophy.

The whole number of under-graduates, who intend being candidates for their bachelor's degree at the ensuing January, pass in review before four moderators in the species of exercises we have just described. The moderators are thereby enabled to make out a scale of classes, in which the pupils are grouped, for the final examination, previous to their degree. This commences on a Monday morning, at eight o'clock, about the middle of January, and is continued for eight hours on each of four successive days; at the expiration of which, the candidates are arranged in fresh groupes, with the most scrupulous regard to the degree of proficiency they have exhibited during this arduous trial. The examination is then resumed on the Friday, and sometimes continued till a late hour at night. On Saturday morning, the decisive and ultimate classification is appended to the pillars in the senate-house. The impression of anxiety with which this is perused by the young men, will hardly be conceived by any but those

who have devoted three years to the keen and continual prosecution of their studies, with the anticipation of this interesting moment always before their eyes.

This catalogue is called the Tripos Paper. It contains generally about forty names, selected from eighty or ninety, the number who annually graduate. The forty are divided into three grades; and the names in each grade are not arranged alphabetically, but according to a scrutiny of their attainments, as exact, minute, and prolonged, as can be considered either practicable or necessary.

The labour of the examiners is prodigious. During the whole five days they are employed in proposing questions to the pupils in every department of mathematical science. In the evening they have a more laborious duty to perform, in a careful perusal of all the written solutions, in order to ascertain the correctness or ingenuity displayed by the respective pupils. I ought to have noticed before, that one day of the five is devoted to moral philosophy. Though, I must confess, it was the general opinion, in my time, that much stress was not laid upon this portion of the examination. If you are of opinion that this is a blemish, (and no doubt in a certain sense it is so,) you will perhaps be more surprised to learn, that in this last examination for the bachelor's degree, classical attainments are not considered in any shape whatever. This forms an in-

dubitable proof, that the genius of the Cambridge system leans decidedly, and some may say exclusively, to the mathematics; yet I have always regarded in the light of an excuse for this apparent monopoly of mathematics, the provision which is made for other studies, not only directly in the college exercises, but incidentally and collaterally, by training the mind to patient investigation, and by seasoning it for that vigorous application, without which no difficult or valuable study can be prosecuted with success.

It may farther be stated, as a proof of the desire of the university to blend classical learning with mathematical knowledge, that two gold medals are given annually to the best proficient in Greek and Roman literature, among the new bachelors who have previously attained a place in the first or second grade of honours.

Besides the studies I have noticed, which form, as it were, the established routine and standard discipline of the place, there are several subjects proposed in the shape of prizes, for which those who choose of the under-graduates may become competitors*. There are lectures, moreover, by the respective professors, on chemistry, mineralogy, theology, on civil law, on domestic medicine, on Arabic, on experimental philosophy, on modern history, on the laws of England. The

* List. Sec N . V.

attendance on these lectures is optional, except that candidates for holy orders must present a certificate of having attended the divinity lectures before ordination ; as must the students in law and physic, of having attended their professors, before admission to a degree in their respective faculties.

I do not know whether I have omitted any subject that it would have been desirable for me to have mentioned. I hope I have not :—Should any such suggest itself to you, or on which you require fuller information, I will endeavour to supply the defect at a future time. Before concluding, I may refer you, or any person who wishes to inspect a specimen of the nature, variety, and difficulty of the problems proposed to the candidates, for the first degree in arts, to a little volume lately published, containing the Cambridge problems for the last ten years ; and as a means of judging accurately of the annual examination at Trinity, and of the measure of proficiency expected from the young men, I subjoin two papers that were very lately given on that occasion. Believe me to remain, my dear Sir, very faithfully your's,

F. G.

COPY OF THE PAPER ON ASTRONOMY,

Given to the young of the Second year at Trinity College, at the Annual Examination 1813.

The Student is required fairly to write out his solutions of such of these problems as his skill enables him; and generally only two hours are allowed him for that purpose.

1. Mention some of the arguments by which the truth of the Copernican System is established.
2. Define and explain the causes of refraction, parallax, the precession of the equinoxes, and the aberration of light.
3. Shew the necessity of the Gregorian correction of the Calendar, and explain the Astronomical difficulty in determining the precise length of the year.
4. What are the causes of eclipses? Why do they not return monthly? After what periods do they return in the same order?
5. Determine the hour of the day, by observing the Sun's altitude, his declination, and the latitude of the place. Explain the mode of making this observation on land,—notice the requisite corrections.
6. In a given latitude, the Sun's motion in azimuth, when on the prime vertical, was observed to be to

his motion in alt. as M. N. Required, the time of the year.

7. A planet in opposition was observed to have the same declination as a known fixed star; after having moved through a given space in longitude, it was observed to have the same R. A. as the star. Required, declination of the planet at last observation.
8. Construct a vertical S. E. dial, for the latitude of Cambridge. How many hours will it shew at the summer solstice?
9. Prove that for the same planet, the horizontal parallax being given, the parallax in R. A. varies as the sine of the hour angle,
10. Given the places of Earth and Venus,—delineate the phases of Venus, and find her position when brightest.
11. The elongation of a planet being observed when stationary, find its distance from the sun compared with that of the earth.
12. Having given the true and apparent altitudes of the moon, and its horizontal semi-diameter,—find the increase at different altitudes,
13. Explain the phenomenon of the harvest moon,
14. Prove that the equation of time is equal to the difference of the sun's true R. A. and of his mean longitude, corrected by the equation of the equinoxes in R. A. and find the sun's longitude, when

- that part which arises from the obliquity of the ecliptic is a max.
15. The latitude and longitude of a star being given,—find the times when its aberration in R. A. and declination are nothing, and investigate a general expression for the aberration in R. A.
 16. Find the path of aberration of a fixed star, the earth's orbit being supposed a parabola.
 17. Having given the mean, investigate the eccentric anomaly of a planet.
 18. Determine from the heliocentric, the geocentric longitude and latitude of a planet.
 19. Prove that the precession of a star in N P. D is least when the star is on the solstitial colure, and that the annual precession in R. A. $= 50''.34 \times (\cos. m + \sin. m \times \sin. \text{stars R. A.} \times \text{tang. stars declination})$ m being the obliquity of the ecliptic.
 20. Prove that the duration of an eclipse may be computed from the expression $\frac{2}{\pi} \times \sin. \theta \times \sqrt{c^2 - \lambda^2 \times \sin.^2 \theta}$, π being the moon's motion in latitude θ the inclination of the relative orbit, λ the moon's latitude when in opposition, and c the sum of the semi-diameters of the sun and moon increased by their horizontal parrallax.
 21. Having given the latitude of the place, the obliquity of ecliptic, and the right angle of the mid-heaven, determine the altitude of the nonagesimal.
 22. Explain the method of finding the longitude from

the increase of moon's R. A. during her passage between two meridians.

23. Having given the declination of a circumpolar star, the time of its passing the true meridian, and time of passing an apparent meridian of a transit telescope,—find the error of the transit instrument in azimuth, and in the level of its axis.
24. Supposing the earth to fall in a right line to the sun, compare the times of describing the first and last half of the distance.

PAPER ON THE HYPOLYTUS, &c.

Given to the Under-Graduates of the first year, at the Annual Examination at Trinity College, Cambridge, 1813.

1. Give Aristotle's account of the derivation of the terms δράμα, and κωμωδία. Explain τραγῳδία, by quotation from Horace. Derive and Explain τρυγῳδία.
2. Trace the progress of Tragedy, assigning the improvements to their proper authors, and quoting what Horace has said upon the subject.
4. Point out the distinguishing features of the three Greek Tragedians, and Euripides's peculiarities in point of prologue, chorus, and language.
5. Distinguish between quantity, accent, and breathing. Give an account of the circumflex accent.

- What is the genius of the Attic and Æolic dialects respecting accentuation? From what Greek dialect is the Latin chiefly derived?
6. Construct a scheme of the tragic senarius. In what cases must the fifth foot be an iambus? Give also schemes of the three verses that occur in regular systems of Anapæsts; and state which of those have the last syllable common, and which have not.
 7. Draw a map of Attica and Peloponnesus,—marking the situations of Træsene, Athens, Eleusis, Argos, Epidaurus.
 8. Give some account of Theseus' war with the Amazons, and of his alterations and institutions in the city of Athens.
 9. What passages of this play are quoted, or alluded to by Aristophanes?
 10. In what respects do the plot and conduct of the Phædra of Racine differ from those of the Hippolytus.
 11. Give instances of expressions and constructions similar to the following:

1. τα πολλά δὲ
παλαι προκοψάσ', ἢ ποιοῦ πολλὰ μὲ δαΐ
2. ἰσθί—προδύσα εὐς παῖδας
3. Ἰππολύτος ἀγὼν Πιθῶος παιδευμάτων
4. μὲν Πιθῶος τι γῆρας ἐργασται νῦν
5. μᾶλλον ἀλγίων
ἀνθρώπος ἔσται.

12. What are the original senses of *τέγω, θάίω, ἀτλάω*
προκοπῶ, παρακοπῶ, ανασείραζω
13. How do *ῥῖν, ῖν*—*ἀγχόνῃ ἀγχονή* *θία θιά* *ῥρος ῥρος* differ in signification? and *ἄλιος ἥλιος καλλῖων καλλῖων*
γλῶσσα, γλῶττα in dialect?
14. Quote from classic authors, Greek, Latin, or English, passages similar to the following :

τερεμνα τόικων μη ποτε φθογγῇ ἀφῇ
φοιτᾷ δ' αὖ αἰθερ' ἔστι δ' ἐν θαλάσσεια
κλυδῶνι κυπρις.

σοὶ τόνδε πλεκτόν στεφανοὶ φέρω

if taken figuratively.

15. Mention the various readings that have been proposed, and different ways of rendering the following passages :

Και πρὶν μὲν εἰλθεῖν τῆνδε γῆν τροίχητιαν
πέτραι παρ' αὐτὴν Παλλάδος, κατοψίον
γῆς τῆσδε, γαίῃ κυπρίδος καθέστατο
εἰρῶν' ἐρωτ' ἐκδημοῖ Ἰππολύτω δ' ἐπὶ
τὸ λοιπὸν ὠνομαζειν ἰδρυσθαι δεῖαν.

16. Translate the following literally into English prose :

αὐτὸς δὲ τλημῶν, ἠϊασιν ἐμπλακεις
δασμοὶ δυσέκηνυστον ἐλκεται δεθεῖς·
σποδυμένος μὲν πρὸς πέτρας φίλον καρὰ,
θραυνὸν δὲ σαρκαῖ, δεσπᾶ δ' ἐκκλυδῶν κλυεῖν·

ὅτ' ἔστ', ὦ φαττασι τὰς ἐμαῖς τιθραμμέναις
 μη μ' ἐξαλειφῇτ' ὦ πατρός ταλαῖν' ἀρὰ·
 τις ἀνδρ' ἀρίστον βυλῆται σῶσαι παρών ;
 πολλοὶ δὲ βυλῆντες, ὑστέρῳ ποδὶ
 εὐπειπομένθα· χ' ὦ μιν ἐκ δεισμών λυθεῖς
 τμήτων ἱμαντῶν, ἢ κατειδ' ὅτ' ὡ τροπῶ
 πίπτει, βραχύνῃ δὲ βίοντι ἐμπνέων ἴτι
 ἵπποι δ' ἐκρυφθῇ, καὶ τὸ δυστήνιστον τέρας
 ταυρῶν, λιπαίας ἢ κατειδ' ὅπου χθονός.

17. Translate the following into Latin verse, English verse,
 or Latin prose ; give the metrical denomination of
 verses 2, 3, 4, 5, 9.

Οὐκίτι σύζυγιαν πῶλων ἔνταϊν ἐπὶ βῆσαι

τοῖ ἀμφὶ λίμνας τροχόν

κατεχών ποδὶ γυμνάδας ἵππους.

μῦσα δ' αὐπνός ἐπ' ἀντυγί χορδαῖν

λῆξει πατρῶν ἀνα δόμον·

ἐκτεφανοὶ δὲ κορας ἀναπαυλαί

λατὺς βαθεῖαν ἀναχλοαί·

τυμφιδίων δ' ἀπολωλε φυλαῖ σᾶ

κεκτρῶν ἀμιλλα κεραις.

εγὼ δὲ σᾶδυστυχία

δακρυεὶ διοσῶ

ποτμον ἀποτμον ὦ ταλαίνα

μάτεριτικὸς ἀνοστα· φευ,

μαίῳ θείας

ἰα ἡ συνζυγία Χάρτις
 τι τῶ τάλαν' ἐκ πατρὸς
 ἥως, οὐδὲν αἶται αἰτίῃ
 πέμπτε τῶνδ' ἀπ' αὐτοῦ.

List of University Prizes annually given, for which all under-graduates may become competitors.

A gold medal for the first Greek ode (Sapphic.)

Ditto for best Latin ode after the manner of Horace.

Ditto for a pair of epigrams: one Greek, after the manner of the *Anthologia*; the other Latin, after the manner of *Martial*.

A prize, value L.15, for the best dissertation on some subject connected with the evidences of Christianity.

No. II.

ON WESTMINSTER SCHOOL.

MY DEAR SIR,

As the part of your letter of most importance to yourself, I shall first reply to that which contains your queries relative to Westminster; and that I may furnish you with all the information I possess on the subject, I shall carry you through the school, from the lowest form to the highest. The different forms, or classes, are divided into two schools, called the under and the upper school. The under comprises all the forms from the petty to the upper third. The upper, all from the under fourth to the seventh. Very few boys (indeed in my time I remember but two who did it) ever pass through the whole school, commencing their education in the lowest, and finishing it in the highest form. But to such as do so, the progress of their studies will be as follows. In the petty form, they will learn for

six or perhaps twelve months, the first rudiments of the Latin grammar. They will then pass into the under part of the first form, in which they will be taught the rules of syntax ; which having acquired, they will be placed in the upper part of the first form, and there they will read *Selectæ E. Profanis*, *Cornelius Nepos*, and be given little syntactical exercises to arrange. After being one year in the second classes of the first form, they will spend one more in the second classes of the second. Here they go on in committing to memory all the rules of the Westminster Latin Grammar, (which, you will observe, forms a material part of their studies through the whole of the under school,) reading *Phædrus*, and acquiring the elementary parts of prosody. This year being finished, they pass into the third form ; in the under part of which they learn to make *nonsense* verses, (an exercise which I suppose it is unnecessary to explain,) translate *Ovid's Metamorphoses*, turn little sacred pieces into Latin ; and in the upper class of this form they turn the *Psalms* into Latin verse, and continue the study of *Ovid*.

This finishes their education in the under school, in which they have now been three years and a half, and they are next moved into the upper, and probably at the age of ten or eleven ; six or seven being the age at which boys are generally sent into the petty form. In the under part of the fourth form they begin the Greek grammar ; write two themes in the week, one

Latin the other English; and on the Saturday turn some sacred pieces into Latin verse, to be given to the master on Monday morning. Here, also, they begin the *Æneid*. In the upper part of the form they continue the same course of studies, with the addition of reading the short epigrams in the *Anthologia*. They then proceed to the fifth form, in which their course of reading is nearly the same, except that, in the upper part, they read the first book of the *Iliad*, and translate parts of the Old Testament into Latin verse. They next go into the shell, where their studies are composed of writing two themes in the week; writing two copies of verses in the week, reading Homer, Virgil, Horace, and Martial. In the sixth form, the same number of exercises in verse and prose composition are required as in the shell; and here the *Odyssey*, the Greek tragedians, Horace, Juvenal, Livy, Grotius, are the principal classical books made use of. The seventh form is confined to boys on the *foundation*. In this the reading is the same as in the sixth, with the addition of the Hebrew Grammar and Psalter,

I have now enumerated the chief part of a Westminster boy's studies, from the lowest to the highest form. I may have, through forgetfulness, omitted some; indeed I have left out the Greek Testament and Cæsar's Commentaries: and I dare say there are other books which have escaped my memory. I will now mention the time that is given to these studies. In summer, the

boys go into school at seven, in winter at eight o'clock of the morning. They remain there till half after nine; and half an hour being allowed for breakfast, return at ten, and remain till twelve. Evening school opens again at two, and goes out at five. This is the case on the Mondays, Wednesdays, and Fridays, of every week. Tuesdays, Thursdays, and Saturdays, are half holidays. On the two latter days, exercises are given to the boys to prepare against the head school morning. But no exercise is given on the Tuesday; this day being set apart for other studies: such as writing, arithmetic, geography, and mathematics;—none of which are taught by any of the masters belonging to the school, or form any part of the learning taught in the public sēminary. You will say, that one day in the week is little enough to appropriate to these acquirements; but then, it must be recollected, that every *saint's* day is a *whole* holiday; besides, some public day, such as the anniversary of the Powder-plot, the the King's accession, &c. all of which are given up to the private teachers, at least may be, if it be the will of the parents. The vacations are five weeks at the end of summer; four weeks at Christmas, and one at Easter.

In regard to the expence of education, I have heard that, since my time, it has been increased; but whether this is so or not I cannot positively say, but in my time it was *ten guineas per annum*. You will of

course see, that the expenses of board and lodging are perfectly a distinct account. With all this the teachers have nothing to do, except that some of their wives keep boarding-houses. But the whole expense of a *home-boarder* was in my time ten guineas. The number of years boys generally stay at Westminster may be reckoned from four to six; because the majority come in a state to be placed on their first arrival in the upper school. Very many are fit to be placed in the fifth and shell, and then stay only two or three years; but I think six is the average. You will observe, that the foundation-boys are distinct from the town's boys; their studies are the same, but their education is of course gratis: and though the foundation was certainly intended for the children of parents unable to provide in any other way for the classical instruction of their progeny, yet the manner and mode by which election into the college is connected, opens the door to *all*, and some of the *first noblemen* have been king's scholars; and indeed I should be sorry to see the appointment given in any other way, for it now depends solely on a boy's own merits. Any boy in the upper school may declare himself a candidate; and about three months before Easter, all the candidates stand out before the master, and challenge one another in exercises of Greek and Latin. I have known from thirty to forty candidates stand out. Eight only can be elected; and these eight are those boys who, after

three months trial of skill, have obtained the eight first places. I have now, I think, told you all that is material relative to a Westminster-school education. If any thing else occurs I will furnish you with it.

No. III.

ON THE ST ANDREW'S UNIVERSITY.

MY DEAR SIR,

AGREEABLY to your request, I have the pleasure of communicating to you a short outline of the plan of study followed in the philosophy college here ;— but, first, let me offer a few remarks, in answer to your observations respecting the *local advantages* of this university.

“ I have been frequently surprised,” you say, “ and, particularly since I visited your city, that St. Andrew's should not be more frequented than it is at present, the situation being so retired and salubrious, and the reputation of several of the professors so high. I hope I shall have much good to say of it in my survey ; and I shall, without doubt, recommend it for the reasons to which I have alluded. Your Dr Hunter, I believe,

stands at the very top of classical scholars ; and you have several other of great name."

St Andrew's does, indeed, possess peculiar *local advantages*, as the seat of a university. The retired situation of the place, the salubrity of the air, and the extent of the public walks, are not less favourable to study than to health. Habits of industry and sobriety are more easily formed in the absence of temptation ; and here are no public amusements to divert the attention of the students from their academical pursuits ; or none but such as serve for exercise and innocent relaxation. In a small town like this, too, where there is a respectable and intelligent society, and where every individual is generally known, and his conduct observed, a young man finds himself placed in circumstances peculiarly favourable to the acquisition of virtuous habits. Those of correct character and genteel manners, meet with great attention from the professors, and the other respectable inhabitants ; and, under the tuition of the former,

Nemo adeo ferus est, ut non mitescere possit.
So modo culturae patientem commodet aurem.

This university, which has long boasted some men of the first literary eminence, has, within these few years, received a great accession of talent and scientific acquirement. Several of the present professors are en-

thusiasts in their different departments, and have the art of inspiring their pupils, to whom they give prizes for general eminence, with the like enthusiasm.* But the most distinguished abilities and acquirements, the most indefatigable assiduity, and the greatest enthusiasm united, cannot overcome the *local disadvantages* which operate against this university. In the two most populous commercial towns within the district, there are flourishing academies, at which many young men are now educated, who would otherwise have studied here. Those, then, have diverted part of its sources. What from this, and from its insulated situation between Edinburgh and Aberdeen, particularly in consequence of the attractions of the former, not only as a medical and law school of long established reputation, but as a place of fashionable resort, the numbers at St Andrew's must always be inconsiderable. The education of their daughters, too, has hitherto been a further inducement

* As an instance of the zeal of some of our professors to promote and encourage that ardour which they have lately excited among the students, besides prizes of books to those who distinguished themselves in several other classes, three gold medals were given at the end of last session, to the three most distinguished students of mathematics; one by the professor of mathematics, one by the present rector, and one by the professor of natural philosophy. Only one medal was intended to have been given; but, after an unusually patient and protracted examination, the talents and proficiency of three gentlemen were found so equal, that the judges could not decide on their comparative superiority. It was therefore resolved, that a medal should be given to each of them.

to many of the country gentlemen to prefer Edinburgh, where, of course, they reside during the winter months; but any ground of preference on that score no longer exists, since there are now in St Andrew's female boarding-schools not inferior to any in Edinburgh;—and it is obvious, that the local advantages enumerated above, are peculiarly favourable to the establishment of female seminaries here.

These remarks I have thought it proper to make, not with a wish to challenge any comparison with the sister universities, (for this, I am aware, those learned gentlemen here who have the least cause to dread it, would deprecate,) but as an impartial bystander, in justice to the learned and respectable body among whom I reside; and let it be observed, I bear this my uninfluenced and unsolicited testimony in their favour, not from hearsay, (the authority on which ignorance and prejudice misrepresent and calumniate them,) but from my own personal knowledge and observation.

At a public dinner of the university, on a visit of the chancellor about thirty years ago, one of the toasts given by the chair was,—*the arts and sciences*. A venerable old gentleman, (Professor B——n,) being very deaf, or archly affecting not to have heard, or to have mistaken the toast, drank—*absent friends*. Whether at that time, or at any period prior or subsequent, as has been reported, the muses deserted this their once fa-

voured retreat, I know not ; but, if so, I need only say, they are now to be found here, cultivating the sciences and polite literature, with enthusiastic ardour. Let the following plain statement of facts bear witness :

A short outline of the Plan of Study followed in the United College of St Salvador and St Leonard, in the University of St Andrew's.

Humanity or Latin Classes. First, or junior Class.

John Hunter LL.D.
This Class meets two hours a-day.

FOR the first two or three weeks of the session, till the class is full, they read Sallust ; after that, one of Terence's plays ; then some books of Virgil's *Æneid* ; then as much of the first five books of Livy as they can overtake. This is their employment at one of the hours of meeting. The other hour is employed in rendering English into Latin, in some mode or other ; first, in giving an explanation and exemplification of the rules of syntax, for which purpose Mair's Introduction is used as a text-book ; afterwards in translating from Cæsar's Commentaries, and re-translating, without book, into Latin. They have also regularly once a-week a written exercise, either Latin into English, or English into Latin. One hour on Saturday is

employed in a grammatical competition for prizes on the elementary parts of the Latin language, the genders and flexions of nouns, and the flexions of verbs.

This is the business of the junior class.

Second Class.

THE other class, that is, the advanced class, meets one hour a-day, and is usually attended by all the older students at college, although the professor accepts no fees from those who have attended him twice before. They generally read a book of Livy's History; sometimes Cicero's Orations, Virgil's Georgics, a play of Plautus', or a selection of Horace's Odes, or of the Satires of Horace and Juvenal. They get frequent written exercises,—very commonly of difficult passages of Livy, which give an opportunity of communicating information on subjects of philology or Roman antiquities, which otherwise might not occur. Two days of the week, during the half of the hour of meeting, a grammatical or philological lecture is given by the professor. The students have prescribed to them a great many written essays on subjects to which the principles communicated in the lectures are applicable. One principal object is, giving the *rationale* of Latin phraseology, or that of other languages. The students of both classes are daily and regularly examined.

Greek Classes.

THE first, or junior class, besides studying the grammar very minutely, read various passages in Mr Dalziel's *Collectanea Minora*, and conclude with about half a book of the Iliad of Homer. A part of every hour is employed in examination. Exercises are prescribed, to habituate the students to the principles of the grammar. This class meets two hours on three days of the week, and one hour on the other three.

There is a second class for those who are farther advanced, which meets one hour a-day, and which is attended by all the older students at college, though, as in the second Latin class, they pay for only one year, if they have previously attended the junior class. If they have not attended the junior class, they pay for two years. In this class, after reading two books of Homer's Iliad, the students are made to translate various passages from the most eminent Greek writers in Mr Dalziel's larger collection. Once a fortnight, the professor lectures on the literature, and government, and manners of the states of Greece; and, as the students generally attend this class for three years, his course is of that length. Except on the days on which the professor lectures, a part of the hour is employed in examination. Once a fortnight a translation is prescribed from some of the Greek classics, either into Latin or

into English; and twice during the session an essay is prescribed on some subject on which the professor has previously lectured.

Logic, Rhetoric, and Belles Lettres Class.

THIS class meets one hour a-day, about one half of which is employed in examination. The professor informs me, that written essays on the subjects discussed in the course of the lectures are frequently prescribed, and, occasionally, translations of difficult passages from Sallust and Livy, which are expected to be rendered into elegant English. It may here be observed, that the present professor of logic, who resided several years on the continent, teaches a French class, which is very well attended.

Mathematical Classes.

Robert Hood and A. M.

First Class.

IN this class are taught the first six books of Euclid, the elements of algebra, and plane trigonometry, with its application to the mensuration of heights and distances. By the arrangement of the college, one hour a-day is allotted to this class; but, during the months of March and April, the professor has been in the habit of teaching an extra hour in the morning, when he instructs the students in practical geometry, the use of

mathematical instruments, and various subjects to which he has not time to direct their attention at the regular hour appointed for the class. The text book for geometry is Playfair's Euclid. The elementary treatises on algebra chiefly used, are those of Bridge and Bonnycastle. Exercises are daily prescribed in geometry and algebra, and many of these must be performed in presence of the professor. In the course of the session there are several examinations, at which the principal and other professors attend. The general examination, at the end of the session, extends to all the course, and is completely *ad aperturam libri*, the student having no idea on what propositions he is to be examined.

Second Class.

In the second mathematical class, the branches taught are, the geometry of solids, conic sections, spherical trigonometry, with the stereographic projection of the sphere, the higher parts of algebra, and the principles of fluxions. In this class also, exercises are daily prescribed in the different branches of pure and mixed mathematics. An hour every Saturday morning is employed in competition among the students for premiums. Towards the end of the session, this class is frequently taught two hours every day.

Third Class.

THIS class is set apart chiefly for the practical branches of mathematics. In it are taught a full course of mensuration, land-surveying, with the use of the various instruments employed for this purpose, fortification, geometry, and the use of the globes,—navigation, with the most useful problems in nautical astronomy.

The professors of natural philosophy and of mathematics are in the habit of distributing among the more advanced part of their students, not only the most approved works of the British mathematicians, but also the writings of the foreign mathematicians of note. They prescribe, in private, the portions which the students should more particularly read, and thus are enabled, in a considerable degree, to direct the course of their private studies.

Natural Philosophy Class.

Thomas Jackson A. M.

THE natural philosophy class is at present taught two hours on five days of the week, and on Saturday one hour. The first hour is always appropriated to the lecture, and the second to examination and the reading of exercises. In the lecture no particular textbook is used. The professor puts into the hands of the

students the best elementary treatises on natural philosophy, both French and English; and his aim is, to give rather a scientific course considerably different from that of any of them, and exhibiting such a connected series of demonstrations as shall enable a student of tolerable capacity to read all of them with ease and advantage. The exercises, which are frequently prescribed, are of different kinds: essays leading to the practice of composition, when disquisitions occur in which there is not any great proportion of mathematical investigations,—and demonstrations of steps purposely omitted in the lecture,—or exercises in calculation, leading to the application of formula which have been investigated, or of principles which have been explained. A considerable proportion of the students of tolerable capacity come so well prepared, in respect of mathematical attainments, that it is found practicable to introduce many applications of what is most simple in the higher geometry.

Moral Philosophy Class.

John Locke Mth

THE moral philosophy class meets one hour a-day, part of which is devoted to examination. The present professor has always been in the practice of prescribing exercises or essays on the subjects previously discussed in the lectures.

Civil History Class.

THE present professor of civil history, who was lately appointed to his office, has made out a course of lectures, giving a general view of history, and pointing out the best method of studying it; and also including the principles of political economy and jurisprudence; but as most of the students are occupied with classes which they are obliged to attend, and as they seem to consider this lecture as not necessary, not being on the foundation, all his attempts to make a class have hitherto failed. His immediate predecessor was not more successful. He made those welcome who asked his permission to attend the few lectures which he delivered in the course of the session, and took no fees. I have known several respectable professors who occupied this chair, and it has always been little better than a sinecure. It is not, however, like the sinecures of Durham's golden prebends, "otium cum dignitate." With a very small salary, such a sinecure is no great object of ambition to one who holds no other appointment. The present professor was lately presented to the church of Kilconquhar, at the distance of ten miles from St Andrew's, and the presentation has been sustained by the General Assembly, allowing him, at the same time, to retain his professorship. It deserves to be remarked, that the professorship of civil history is at present held as a sinecure even in the flourishing and far-famed uni-

versity of Edinburgh, and that the professor resides in a remote part of the kingdom. It would appear, therefore, that this lecture, however useful, is, in the general course of academical education, deemed of inferior interest. I will not, however, attempt to justify pluralities, even to serve a friend, on any other ground than that, eventually, they may be the means of giving employment to many deserving individuals, for whom the religious establishment of this part of the United Kingdom has made no provision, and many of whom are suffered to languish in indigence and obscurity, without any prospect or chance of preferment.

Chemistry Class.

Robt Briggs M.D.

THE chemical lectures embrace a full course on this interesting and popular branch of science, with its application to the useful arts; but, notwithstanding the present professor's acknowledged eminence as a practical chemist, as this class also is not on the foundation, it is but ill attended. The truth is, that most of the students here are so poor, that, however desirous they may be to attend those lectures which are not on the foundation, and which, however useful, may not be deemed essentially necessary in an academical education, they cannot afford to pay the fees. The professors of those departments, therefore, have the mortification to find themselves placed in situations in which, after all the the labour of preparing a course of lec-

tures, in order to discharge the duty of their office conscientiously, they cannot even have the satisfaction of being, in any considerable degree useful, unless they lecture *gratis*, or take fees from none but those who can conveniently afford them. This, no doubt, would very much damp the ardour of selfish and mercenary minds, — of the sordid votaries of mammon, who are inspired by no other muse, — who own no other divinity ; but we have known some generous enthusiasts, the true sons of science, the disinterested instructors of youth, whose leading motive was the desire of doing good, by the diffusion of useful knowledge ; and, for the credit of human nature, we still know some such characters, who, imitating the bounty and goodness of heaven, “ are pleased with doing good,” even should the objects of their favours be “ barren in return.” It has long been the boast of Scotland, that a liberal education is within the reach of her virtuous peasantry ; and let it not be said of her public teachers, that they ever allowed any one who shewed a thirst for knowledge, to go away unsatisfied. Let them rather have it in copious draughts, “ without money and without price.” In copious draughts receive it, ye generous youth ! if ye would not be vain smatterers, or empty pedants : Ever remembering, that

“ A little learning is a dang’rous thing,
 Drink deep, or taste not the Pierian spring,
 There shallow draughts intoxicate the brain,
 And drinking largely sobers us again.

We'd at first sight with what the muse imparts,
 In fearless youth we tempt the height of arts,
 While from the bounded level of the mind,
 Short views we take, nor see the length behind ;
 But, more advanc'd, behold with strange surprise,
 New distant scenes of endless science rise !
 So pleas'd at first the towering Alps we try,
 Mount o'er the vales, and seem to tread the sky ;
 Th' eternal snows appear already past,
 And the first clouds and mountains seem the last :
 But, those attain'd, we tremble to survey
 The growing labours of the lengthen'd way ;
 Th' increasing prospect tires our wandering eyes,
 Hills peep o'er hills, and Alps on Alps arise."

Henry Aldrich

Having had the best opportunities, during a residence of many years in this place, of knowing the arrangements and the plans of study of the different classes, most of which I have, by indulgence, attended, and several of them repeatedly, particularly the natural philosophy class, on the appointment of new professors, I can vouch for the correctness of this statement ; and, I trust, you know my independence and my forbearance sufficiently, to give me credit for the candour and impartiality of my report.

I have now to answer your other queries.

The session of the United College commences about the 20th of October, and rises the first week of May. The junior classes only, however, meet for the first

fortnight. The other classes do not meet till after the comparative trial for the foundation bursaries, which is on the first Tuesday of November. The *actual* length of the session, therefore, from the general opening of the classes, does not exceed six months.

I ought, perhaps, to have mentioned, among the peculiar advantages enjoyed at this university, that, not only the foundation-bursars have their board at the college-table, but that there is also another table kept for the superior class of students, (at which one of the professors presides in his turn,) on the very moderate terms of L.12 for dinner during the session; or L.16 for breakfast, dinner, and supper. I ought also to add, that those who eat at the college-table, and, for convenience, prefer residing within the walls of the college, have *unfurnished* apartments *gratis*, and hire such furniture as they require. They are attended by the college porter, to whom they pay a trifling acknowledgment for service.

There is an annual public examination of all the classes on the foundation, and of the first and second mathematical classes, in presence of the whole university, which occupies the last five days of the session.

The number of students in the philosophy college last session was one hundred and nine. This is rather above the average number for the last twenty years,

The students have the use of books from the university library, under certain regulations,

As in other universities, the students here have several debating societies among themselves, which may, perhaps, be of some use in exciting a spirit of inquiry, and in initiating and habituating them to public speaking and discussion ; but, as the students are admitted at this university so very young,—sometimes even at the age of eleven or twelve years, (an age at which they can derive little benefit from a course of philosophical lectures ;—an age at which few are capable of following a train of reasoning through all its steps and consequences, far less of arranging and expressing logically even the limited ideas which they may have acquired,) it is questionable, whether these advantages are not more than counter-balanced by the evident tendency of such juvenile societies to encourage petulance and presumption, and to foster a brood of capacious and conceited wranglers. It were to be wished, that these juvenile societies were under the controul of the professors, and that they were restricted to the discussion of such subjects as may be deemed suitable to their years and acquirements. None ought to be admissible into any debating society for the first two sessions, or till they attend the moral philosophy class. This restraint upon the prevailing passion for disputation might be of the most salutary tendency. It might teach them a becoming modesty and diffidence in their

puerile and uncultivated powers ;—virtues which few seem ambitious to acquire, but which their infrequency in the rising generation would render singularly estimable. Those juvenile orators, whose knowledge of the subjects which they so confidently discuss, has not been acquired by study and reflection, by patient inquiry and investigation in the laborious pursuits of literature and science,—should recollect the salutary injunction of that celebrated but modest philosopher, whose scholars, for the first five years, were only to hear and be silent,—to listen with patient attention and docility to the voice of wisdom and experience; and to acquire information before they presume to speak on any subject,

*Loquacity is ever vain and weak,
The wise are swift to hear, but slow to speak,
To play the orator, Vainous aims,—
The sounding cask its emptiness proclaims.
The babbling brook, that through the valley strays,
Its shallow insignificance betrays ;
But deep, though silent, flows by Stirling's tow'rs,
Ling'ring 'mid fertile fields and fragrant bow'rs,
The placid Forth, and leaves the peaceful plain
Reluctantly to meet th' impetuous main.*

*With growing ardour and with steady pace,
The sons of wisdom run their patient race :
With growing ardour let aspiring youth
Ascend the heights of science and of truth ;
Nor weakly deem th' incipient labour o'er,
While ever-opening views are to explore,*

To Truth's blest presence, know, Presumption, Pride,
 Impiety, admittance are denied ;
 But patient Worth and Candour in her train,
 Shall share the glories of her blissful reign ;
 Shall, in the realms of everlasting day,
 At her celestial fount their thirst allay.

In answer to one other query, (the only one, I think, which I have not yet answered,) I have only to say, the professors have a regular weekly meeting on Saturday for matters of discipline. They possess the power of imposing small fines for absence or irregularity, and of punishing petulance and profligacy by expulsion.

Trusting that your intended Survey may be, in some degree, serviceable to the interests of literature and science, and cordially wishing it success, I remain,

My dear Sir,

Ever your's truly,

Wm. ROBE.

Spencer
18th Nov 1840

No. IV.

ON THE PERTH ACADEMY.

DEAR SIR,

THIS Institution was founded in 1760 ; and, as a seminary of commercial and scientific education, has possessed, since its establishment, a considerable share of public confidence and celebrity. The building containing the teaching-rooms, is a very elegant structure in the Doric style, and cost upwards of L.7000. It is situated on the north side of the town, and fronting the beautiful and extensive lawn called the *North Inch*,—a situation which is extremely favourable to the health of the students, both from the salubrity of the air, and the easy opportunity which it affords them of enjoying exercise and innocent amusement after the hours of study are over. The teaching-rooms are large and commodious. They consist of five apartments : two for mathematics, natural philosophy, and chemistry ; one for

languages, one for writing, and one for painting and drawing, together with an apparatus-room. The teachers belonging to the establishment are also five in number, and receive regular salaries out of the funds of the town.

The course of education pursued in this institution is completed in two annual sessions of ten months each; the session commencing in October, and ending in July. The following branches are taught by the rector, or head master, and his assistant.

By the Rector.

1. *Mathematics*, comprehending the theory of plane geometry, with its application to the measurement of heights and distance, navigation, &c.; conic sections, solid geometry, spherical geometry, spherical trigonometry, with its application to the problems of the sphere, dialling, &c. *Algebra*, comprehending equations, series, logarithms, doctrines of chance, interest, annuities, arithmetic of sines, application of algebra to geometry, &c.; *fluxions*.

2. *Physics*, or *Natural Philosophy*, comprehending dynamics, with the application of projectiles to gunnery; mechanics, hydrostatics, including the art of levelling, conducting water, &c.; hydraulics, aerostatics, pneumatics, electricity, galvanism, magnetism, optics, me-

teorology, descriptive, physical, and practical astronomy, including chronology.

3. *Chemistry*, with its application to *arts* and *manufactures*.

By the Assistant.

1. The theory and practice of *arithmetic*; *practical geometry*, including the mensuration of surfaces, surveying, fortification, the mensuration of solids, gauging, and book-keeping in all its varieties, &c.

2. *Physical* and *political geography*, with the projection of maps.

3. *Logic* and the principles of *universal grammar*.

The *modern languages* are the only languages taught in the academy; and are French, German, Italian, and Spanish. These are taught by a master appointed for the purpose. Separate masters are also appointed for teaching drawing and writing.

The apparatus is extensive; it already embraces all the more common philosophical instruments for the illustration of practical mathematics, physics, and chemistry; and by the liberal donations of the noblemen and gentlemen of the county of Perth, who have always

patronised the institution, it is yearly increasing. Among other valuable instruments, it contains the powerful air-pump, constructed by Miller and Adie, with which Mr Leslie first succeeded in freezing mercury by the evaporation of ice.

The students are divided into two classes ; and each class receives four hours of attendance daily, for the mathematical and physical branches. In the other departments only one hour is given daily. A regular attendance of the students, during the hours of teaching, is secured in all the classes by penalties rigidly enforced ; and a constant emulation is maintained by a judicious distribution of rewards to those who distinguish themselves by their talents, their diligence, or their good behaviour. Exercises both on mathematical and literary subjects are frequently prescribed, and such as neglect to perform them are subjected to a penalty.

The fees of attendance paid by the students are moderate, being four guineas a session to the rector and his assistant jointly ; sixteen shillings a quarter for modern languages ; fifteen shillings for drawing, and half a guinea for writing. I am, your, &c.

A. A.

From this brief but very intelligible description of the Perth Academy, the manifold advantages of such an institution in all our larger towns must press themselves upon the observation of every one. For the reasons mentioned in the text, a grammar-school education is neither necessary, nor perhaps very suitable, for such boys as, being intended for business, cannot be allowed sufficient time to reap the advantages of that kind of study; and who, on the very same account, require a course of instruction altogether different. The branches which are detailed above are unquestionably much better calculated to qualify young men for trade, or any department of the manufactories, than the knowledge of a few Latin words, or the smattering of a Grecian classic, which he would be immediately compelled to relinquish. Nor can I refrain from repeating the remark which I formerly made, that such an institution would render that species of education, which is most generally useful in a mercantile country, not only more accessible to all classes of the community, but also a great deal cheaper. We find that French, German, Italian, and Spanish, are taught in the Perth Academy for sixteen shillings a quarter; and as modern languages, mathematics, natural philosophy, and chemistry, are of more consequence to the public than Latin and Greek, in proportion as the number is greater of those who enter into trade than of those who study either to prepare themselves for a learned profession, or for the cultiva-

tion and embellishment of their minds,—so is the claim for public patronage and support in behalf of a seminary where such branches would be taught, at once more urgent and reasonable. Education is now, generally speaking, conducted upon more enlightened and discriminating principles than in former times; and we accordingly have schools for the army, the navy, the artillery, the engineers, the marines, the East-India service both civil and military. This discrimination is even beginning to descend into private life, and one may discover a wish among some parents to regulate the education of their sons by their probable destination in the world; on which account it is the more to be regretted that there are so many obstacles and so much expense to be encountered by those, who depart from the ordinary routine of grammar-school and college classes.

NOTE A.

IT is generally considered a strong confirmation of any opinion, when two or more people, without concert or previous comparison of ideas, come to the same conclusion respecting it. Now, I had not only committed to paper all that I have ventured to state on this interesting topic, but the sheet, in which the reference to this note is placed, was actually in the press before I observed the following passage (which is likewise in the form of a note) in Mr H. Drummond's pamphlet. Speaking of the University of Edinburgh, he says, " Boys matriculate so young, that at the end of the two first years, which are devoted to Greek and Latin, they in general know very little of the former, *and a great deal less of the latter*, than when they left school. This system (viz. sending boys at so early a period from school to college) undoubtedly tends to destroy the patient and industrious habits previously acquired, and to encourage a superficial and inaccurate mode of study, which is very observable in their future progress. I allude to the system only, and not to those whose duty it is to enforce it; for the very exertions I have witnessed serve but to strengthen

my conviction of *the incalculable advantage of continuing the discipline of a school for two years longer.*

Indeed, it is hardly possible to take a clear and unbiassed view of this matter, without coming to this conclusion ; for if a more extensive knowledge of the ancient languages, than can be acquired during the ordinary course of a grammar-school education, is necessary to complete the classical studies of our youth, what is so natural as to make that course a little longer ? If indeed the philological classes at college were avowedly an upper grammar-school, and employed the same means which are employed at school to further the ends of education, there could be no objection to the transference of boys from the one to the other : but when the discipline, the method of teaching, the stimulants to industry, and indeed almost every thing, are so totally different as to constitute quite another system, and that system altogether unsuitable for boys, it is impossible to hesitate as to the propriety of extending the term of residence at school in preference to study at the university.

Mr Drummond's remarks too, it need hardly be mentioned, respect Edinburgh, where the grammar-school is placed upon a more liberal footing than any where else in Scotland ; and they must apply of consequence with double force to Glasgow, and to such seminaries as have their course limited to four years. At the lat-

ter city, indeed, the masters of the high-school are so deeply convinced of the necessity of extending their plan of education, that several of them have of late attempted to introduce Greek, and to add another year to their course. As the constitution of the school does not make provision for more than four years, the class of the fifth year is taught privately, and in the evening,—an expedient which rather shows the necessity of reformation, than holds out any prospect of realizing it.

NOTE B.

THE necessity and advantage of keeping up attention to classical learning, during the whole academical course, must be obvious to every one. Sixty or seventy years ago, the professors usually lectured in Latin; and it was taken for granted, that the students had made sufficient progress in that language to be able to listen, with due understanding and improvement, to discourses composed in it, even on the most abstruse doctrines of ethics and theology. That learned epoch having passed away, lectures were no longer delivered in Latin; and it is likely that both teacher and pupil would find the work of education facilitated by the use of their vernacular tongue. As it happens, however,

in almost every change of system we have, it is to be feared, carried this reformation to an extreme length; and departed so far from the practice of our forefathers, that Latin is very seldom either heard, read, or written, by the students at our universities, after they have left the philological classes. At St Andrew's, indeed, the professor of logic occasionally exacts from his pupils translations of difficult passages in Sallust and Livy, (a species of exercise not quite in harmony with the ordinary notions of a logical course,) and I know not whether there be any other attempt made at that seat of learning to preserve the remembrance of Roman literature, until the student is called upon by the professor of Divinity to write his exegesis. At Aberdeen I have not heard that there are any exercises or readings in Latin prescribed during the study of philosophy; and at Edinburgh I am certain there are none. The practice, therefore, which is kept up in the moral philosophy class at Glasgow, of reading at the *public* hour ethical writers, both ancient and modern, in Latin, deserves the utmost applause; for it not only retains something of the former dignity of a philosophical course at a university, but also supplies a powerful motive to the study both of the languages and the doctrines of antiquity. The professor has, I understand, lately formed a compilation, for the use of his class, from the philosophical works of Cicero and Lucretius, among the ancients, and from those of Bacon, Hutcheson, and others, among the moderns; an undertaking which may be very useful and

convenient ; but which, from a strong dislike to all *excerpta* and *collectanea*, in the hands of students at a university, gives me no great satisfaction. Such extracts, like historical abridgements, rather supersede the author from which they are made, than secure the subsequent study of his works ;—they blunt the appetite instead of proving a *whet* to it.

I forget whether some of the essays prescribed in the physis class were not written in Latin ; but am inclined to think, that the doctrine of *forces* usually constituted the subject of an exercise in that language. There was, however, a Latin oration imposed upon the students of this class ; which was pronounced on the Saturday mornings throughout the session, in the presence of the whole literary and philosophical college assembled in the common hall. These exercises, together with several university prize-essays in Greek and Latin, tend to keep alive the study of ancient literature at Glasgow, more, I think, than at any other Scottish college. There is, indeed, but one public *Greek* exercise prescribed during the four years which make up the academical course ; and, from the meagre acquirements of the students in this language, it would be useless to prescribe a greater number.

At Edinburgh, as I mentioned in one of the letters, there is no attention whatever paid to philology af-

ter the students have entered the philosophical classes. No exercises, no readings, no orations in Greek, Latin, or English are attempted. The faculty of listening, and the faculty of keeping silence, (*le talent de se taire*) are the only attributes of the rational animal which are called into use, in this far-famed University.

THE END.

John Moir, Printer.

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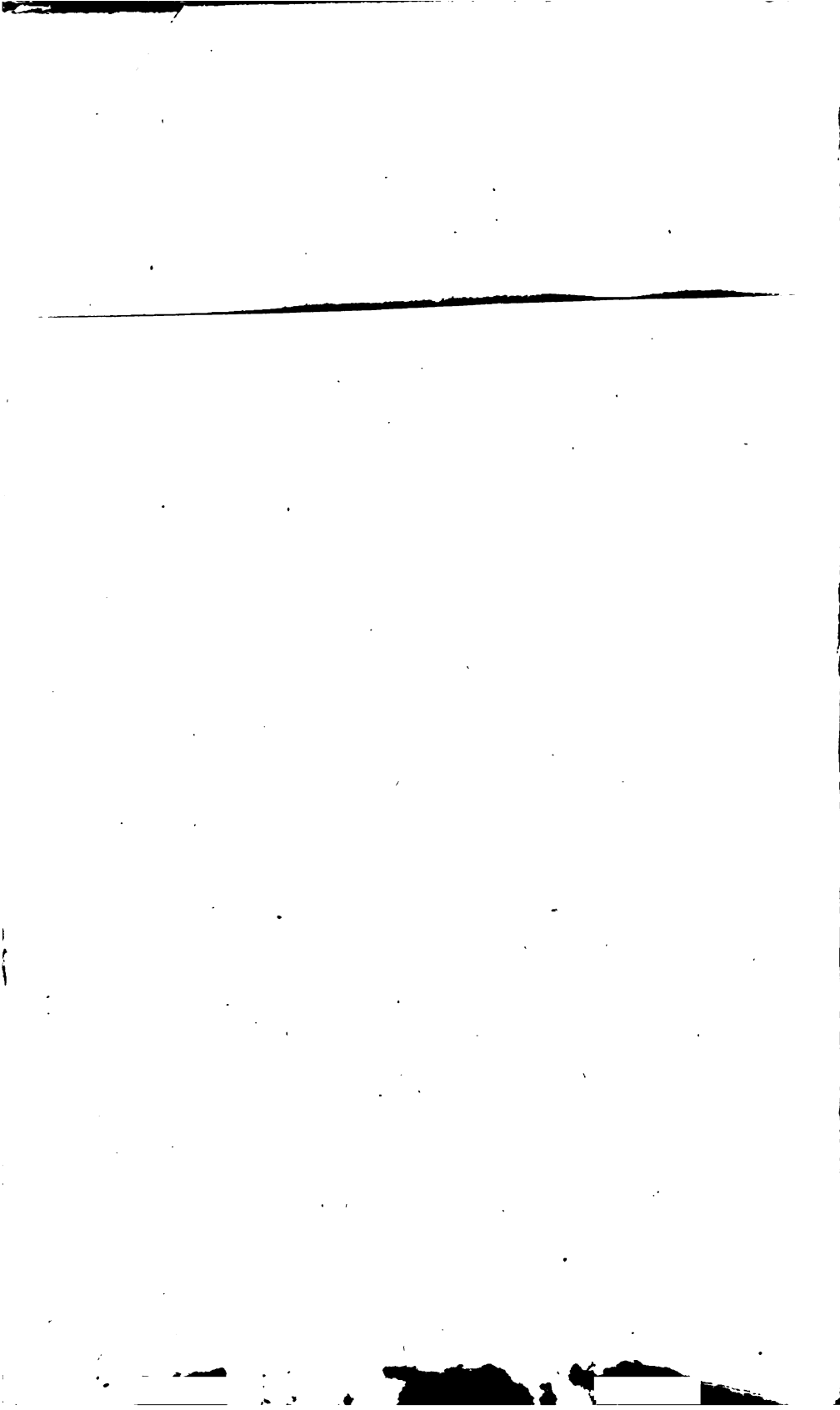
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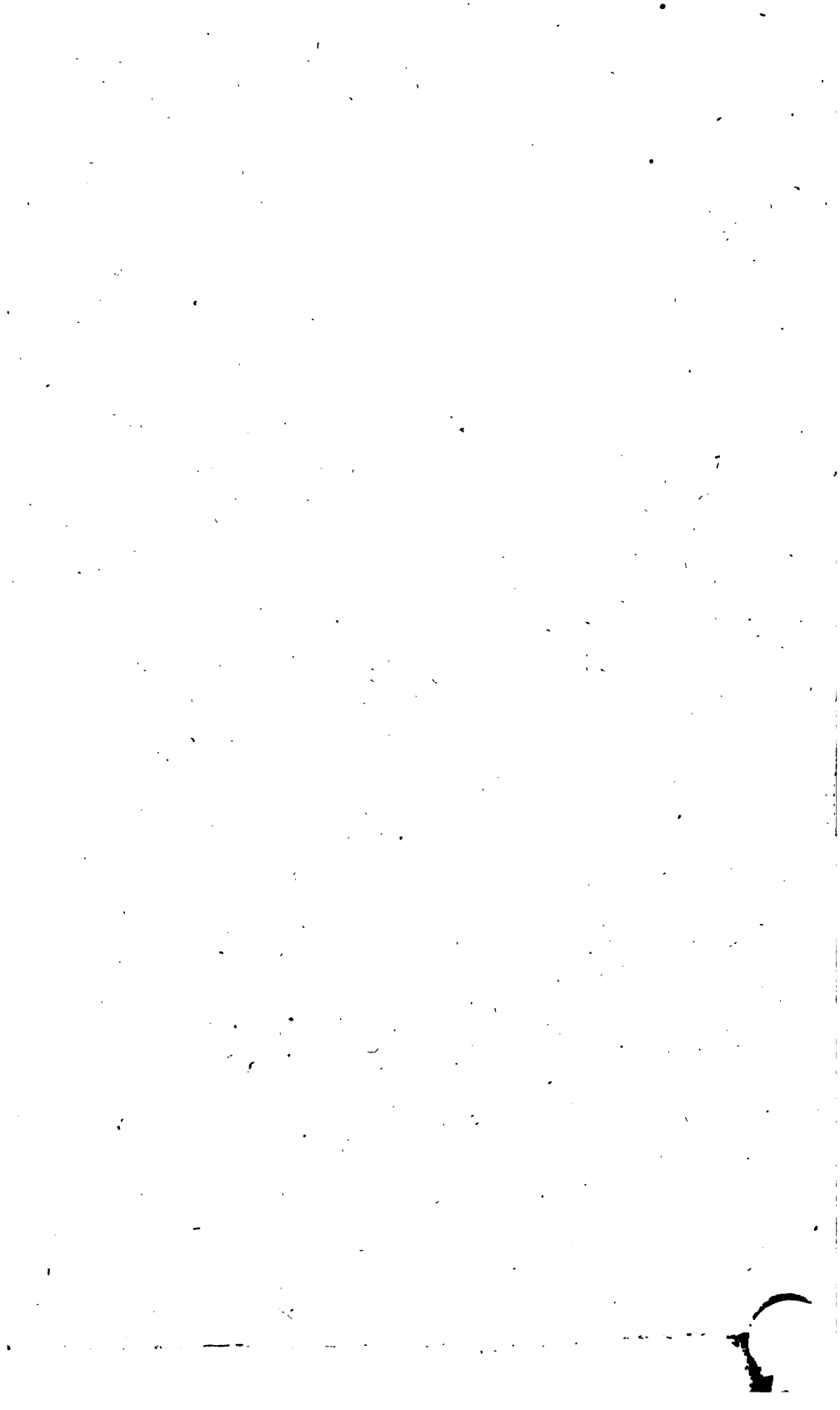
Page	18.	line	6.	insert <i>the</i> after <i>all</i> .
—	25.	—	2.	for <i>attainment</i> , read <i>attainments</i> .
—	31.	—	21.	for <i>recollect</i> , read <i>recollects</i> ; and for <i>those</i> , read <i>the</i> .
—	38.	—	26.	for <i>the others</i> , read <i>that other</i> .
—	41.	—	19.	for <i>above</i> , read <i>so</i> .
—	45.	—	13.	for <i>Lucien</i> , read <i>Lucian</i> .
—	71.	—	14.	for <i>the</i> , read <i>these</i> .
—	81.	bottom of the page,	for <i>No. V.</i>	read <i>No. IV.</i>
—	85.	—	18.	insert <i>and</i> after <i>speech</i> .
—	93.	—	10.	for <i>field</i> , read <i>range</i> .
—	127.	—	15.	for <i>art</i> , read <i>act</i> .
—	165.	—	12.	erase <i>namely</i> .

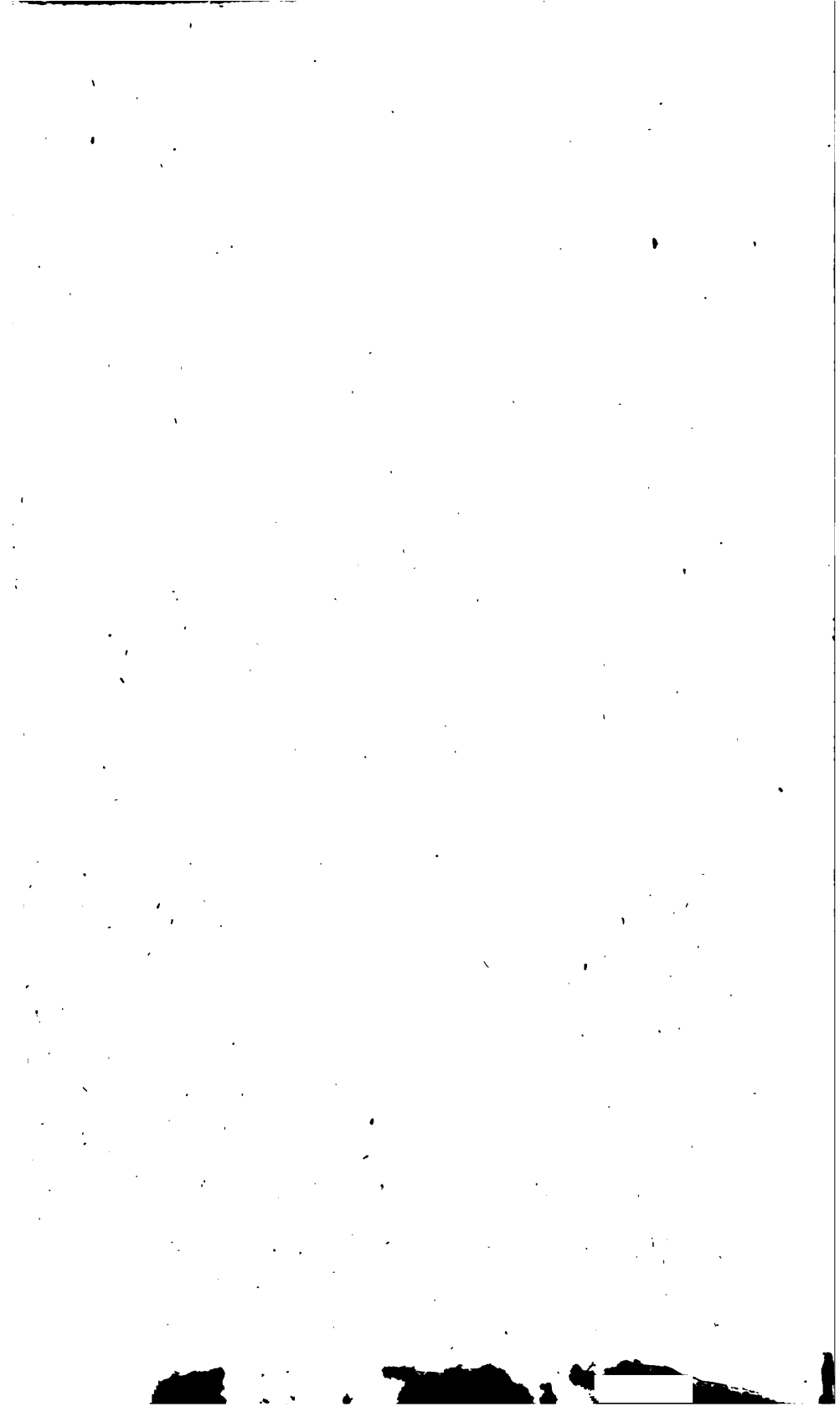
APPENDIX.

Page	i.	—	7.	for <i>unfavourable</i> , read <i>favourable</i> .
—	xxvi.	—	22.	for <i>so</i> , read <i>si</i> .
—	xxxv.	—	13	for <i>formula</i> , read <i>formulae</i> .
—	xxxix.	—	2.	for <i>beight</i> , read <i>heights</i> .

Since the last sheet of this pamphlet was thrown off, the Author has learned, that the fees at St Andrew's are—Three guineas for *Seconders*, *Turners* one guinea and a-half, and not two guineas for all, as he has supposed. The *Seconders* and *Turners* correspond to the Gentlemen Commoners of the English Universities.











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